The Journal of Forensic Vocational Analysis

Official Publication of the American Board of Vocational Experts

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The American Board of Vocational Experts (ABVE) is a professional credentialing body established as a not-for-profit organization. Persons who have attained diplomate or fellow status have advanced academic preparation in the areas of rehabilitation, psychology or counseling and hold advanced degrees from accredited institutions of higher education.

ABVE, representing both the private and public sectors of the rehabilitation enterprise, was founded in 1980 to ensure the integrity and uniqueness of the vocational expert and to set and maintain rigorous standards for ethical practice. As litigation continues to proliferate, and the courts continue to delineate and refine the law, the need for qualified vocational experts becomes essential in the resolution of complex vocational issues in our ever-evolving society.

The certified vocational expert is expected to maintain currency of knowledge regarding the effects of personal injury on earning capacity, labor market changes, hiring practices, knowledge of occupational requirements, as well as the growth and decline of patterns in local labor markets. The ABVE through the presentation of regularly scheduled professional educational seminars and through its various publications, assists the certified vocational expert in the maintenance and expansion of various competencies. The ABVE holds one national conference each year to provide a forum for the exchange of ideas and information regarding forensic practice.

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Diplomate status requires 7 years of vocational expert forensics experience, either in the assessment of vocational capacity and the demonstration of distinguished performance or as a recognized vocational expert. Relevant work conducted by the latter might include published works, a leadership position in a professional organization, the presentation of papers at professional seminars, or service in study groups or on legislative committees to enhance the professionalism of the organization.

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Guidelines for Authors

The Journal of Forensic Vocational Analysis's (JFVA) purpose is to explore and explicate issues of interest to the vocational expert and practitioner; it is a journal that members of the American Board of Vocational Experts and other forensic practitioners may find both intellectually useful and, more importantly, applicable to their forensic practice.

The JFVA seeks to publish original articles that are based on sound research methodology in accordance with the *Publication Manual of the American Psychological Association* (7th ed., 2020). In addition to the publication of original manuscripts, the JFVA regularly features book reviews and commentaries. Occasionally, special issues on select topics and monographs are published. Two issues of the *Journal* will be published each year.

Manuscripts on the following topics are of particular interest:

- Conceptual and empirical manuscripts relevant to medical, economic, psychological, sociological, and rehabilitation principles and practices, vis-à-vis vocational forensic issues.
- Methodologies of economic calculations in forensic practice, inclusive of calculations for loss of earning capacity and other monetary impacts regarding loss associated with disability acquired through product liability, malpractice, or trauma.
- Research and development in the areas of forensic practice including quantitative and qualitative studies relevant to the interdisciplinary nature of vocationology.
- Issues related to updated judicial protocol and procedures, relevance of decisions, and the impact of judicial proceedings on practice.
- Development of protocols for forensic expert testimony.

Proposals for the development of a special issue, monograph, or book or media reviews should be directed to the editor. These proposals will be considered by selected members of the editorial board with the appropriate content expertise. Manuscripts will be reviewed by members of the editorial board who will (1) recommend publication to the manuscript as presented, (2) recommend publication with revisions or (3) not recommend publication. Feedback to authors submitting manuscripts not recommended for publication will directly refer to the major gaps or problems within the submitted document with recommendations for future submission.

All submitted manuscripts must be prepared in accordance with the guidelines of the *Publications Manual of the American Psychological Association* (7th ed., 2020). Do not submit manuscripts that are under review by other periodicals or that have been previously published. There is no prohibition to the acceptance of previously published material provided prior permission has been obtained from the copyright holder and only when such articles/monographs may be more fully dispersed as deemed by the board of directors of the ABVE. Manuscripts should include a brief abstract, a short (3-5 sentence) author biography, and three learning objectives and multiple-choice questions related to the articles.

It is the preference of the editor that all manuscripts be submitted electronically in rich text format (rtf) to Chrisann Schiro-Geist, PhD, at chrisann@memphis.edu. E-mail your manuscript as an attachment without any identifying information in the filename. A cover page with all authors listed, addresses, e-mail and telephone numbers and other identifying in- formation is required to be submitted as an attachment as well. Once received, an acknowledgment letter or e-mail will be transmitted to the submitting author or lead author. The review process will typically average approximately 60 days.

Editorial

Chrisann Schiro-Geist

Dear Colleagues:

Hopefully, we are coming out of the storm and returning to our real lives. It would be fun to track down journals like ours from 100 years ago and see what changed after pandemic times. Unfortunately, there was no ABVE then and our rehabilitation roots were just beginning, so we have no documents like ours to view. What we do have is the fact that our colleagues, girded by the sense of entrepreneurism and ambition characteristic of many vocational experts, will persist and survive. So, this issue of JFVA is a survival issue.

We start out with Yu et al.'s "The Outcome Based Perspective: Benefits of Field-Specific Rehabilitation Councelor Education," which reinforces so clearly the need for training of rehabilitation personnel, especially when working with clients who have intellectual and developmental disabilities. Training really does make a difference in competitive integrated placements. Van de Bittner and Moeller, then, capture our curiosity with the "Admissibility of Vocational Opinions and Vocational Apportionment Revisited: Implications of Recent Court Decisions on the Evaluation of Employability and Earning Capacity." We then have an assessment of "Complex Issues in Vocational Rehabilitation with Functional Capacity Evaluation Results," by Steve Allison and Terry P. Leslie, as well as a look at "The Dollar Value of a Day," also by Terry P. Leslie.

To cap off 2021, we have a review of Stuntzer's *Living with a Disability: Finding Peace Amidst the Storm,* as reviewed by Lainey Goodwill. Imagine spending a Spring evening in bed with your VE history and thinking about client's needs!

We are working on a special issue of *JFVA* for 2022, as well as more "hot topics" for you to think about and, perhaps, weigh in on yourself.

With great hope that 2022 ends with health and success—salute!

- Chris Schiro-Geist

The Outcome-Based Perspective: Benefits of Field-Specific Rehabilitation Counselor Education

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Abstract. *This study compared closure rates (CR) between counselors with a master's degree in rehabilitation counseling (MRC) and those with a master's degree in a related discipline (RM), focusing on comparison of high-quality closure rates (HQCR) among persons with intellectual and developmental disabilities (IDD). Survey data between 2014-2017 was analyzed for 152 IDD clients (n=5,186) in four states. The rate of difference was calculated using multilevel logistic regression with counselors as the cluster level. The overall CR was slightly higher among counselors with MRC than those with RM (32.9% vs. 25.3%, p=0.09), however, CR was significantly higher when limited to clients with less severe disabilities (35.1% in MRC vs. 25.0% in RM, p=0.03). Furthermore, the differences were more pronounced in HQCR (23.5% in MRC vs. 18.2% in RM, p=0.03 in all clients, and 30.7% in MRC vs. 22.5% in RM, p=0.01 in clients with less severe disabilities). The difference in CR for full-time jobs (30+ hours/week) was also significant (22.0% in MRC vs. 16.0% in RM, p=0.007). It appears that counselors with a MRC were more prepared to manage IDD clients than those with a RM. Research findings indicate the main advantages of a MRC—in knowledge domains—include medical and psychological knowledge, career development and job placement, and disability management. As such, a MRC education may provide more relevant training and, thereby, yield better closure rates in cases pertaining to IDD clients than other related disciplines*
Keywords*: Rehabilitation education, credentials, vocational counseling, closure rate, high-quality job placement, knowledge domain, evidence-based practice.*

Research indicating the longstanding employment disadvantage among job seekers with intellectual and developmental disabilities (IDD) is copious (Jahoda, 2008; Lysaght, 2012). Increasingly, the market relies on more advanced knowledge, increasing barriers to high quality jobs. Employment applicants with IDD have been shown to be three-to-four times less likely to obtain opportunities compared to their non-disabled peers. Further, when employed individuals with IDD are hired, it is often in sheltered work or segregated settings (Verdonschot, 2009). The Rehabilitation Services Administration's mission is to maximize client independence and integration into the competitive labor market (RSA, 2017). To meet these objectives, rehabilitation counselors (RCs) require specialized training. Graduate students are to demonstrate knowledge, skills, and attitudes necessary to address varied issues within the rehabilitation counseling context, inclusive of job placement (CACREP, 2016). Additionally, the standard established for professional excellence through the Commission on Rehabilitation Counselor Certification (CRCC), indicates that rehabilitation counselors are the only professional counselors educated and trained at the graduate-level who possess the specialized knowledge, skills, and attitudes to work collaboratively with individuals with disabilities (CRCC, 2017). A major deterrent to improving high quality employment rates is the growing need for additional RCs, and this shortage is most acute in the state federal vocational rehabilitation (VR) program (Barrett et al., 1997; O'Brien & Graham, 2009). The Workforce Innovation and Opportunity Act (WIOA, 2014) introduced sweeping changes, one of which enabled master's level graduates from diverse educational backgrounds to join the ranks of rehabilitation counselors, despite lack of field-specific education or training. While this action increased the ranks of rehabilitation counselors overall, little research has been conducted to measure proficiency differentials and the impact to client care.

One measure of readiness within the field is the National Certified Rehabilitation Counselor (CRC) examination, a requirement for VR counselors. In research we conducted previously, the knowledge domains covered by this examination were validated with role and function studies for practicing counselors (Leahy, 2018). In this validation study, counselors—based on their employment functions and needs—prioritized the knowledge and skills deemed necessary for their day-to-day practice. Three salient areas emerged: 1) management of medical and psychological conditions, 2) career development and job placement, and 3) case management. Despite these indications, it remains unclear whether improved training in these areas would actually lead to improved employment outcomes among clients.

During our earlier research, we measured differences in client outcomes since the enactment of WIOA. Our findings showed a moderate difference in CR among MRCs when compared RMs. A significant finding is that the difference is most pronounced within the first six years of practice, specifically for a MRC who provides services to clients with less severe disabilities (Mackay et al., 2018a). Further, the study indicates that the main difference in closure rates, between those with a MRC and those with a RM, is the rate at which clients obtain high-quality jobs, i.e., those providing full-time employment and a living wage. These jobs are the essential factor to achieve personal, social, psychological, career, and independent-living goals for individuals with IDD.

The current study builds on our previous research, which was limited to one state and included all clients without differentiation of disability type. That study, being limited to one state, did not answer whether specific knowledge and domains were more important in accounting for the difference in employment outcomes for counselors with an MRC and RM. Connecticut, Florida, Idaho, and Utah have each contributed data from VR counselors and their representative clients. The goal of this study is to examine the key differences in closure rates between MRC and RM counselors and measure these differences for training improvements. An outcome-based framework will,

then, explore the critical differences in the knowledge domains that may account for differences in CRs.

Counselor Education and Client Outcomes

Although the impact of vocational rehabilitation (VR) counselor education on client outcomes was addressed over three decades ago (Szymanski & Parker, 1989), it resurfaced due to the expansion of counselor's qualification for VR. Our previous research also included a detailed review (Mackay et al., 2018a; Mackay et al., 2018b). Early research in the late 1980s and 1990s showed a lack of—or weak—association between a counselor's education specialty and client outcomes. However, a few studies did suggest a specialty in RC may lead to more positive outcomes than other specialties (Wheaton, 1994). Our previous research was the first recent study to suggest that obtaining a MRC may lead to higher closure rates than a RM, based on surveys of counselors and the linked client outcomes (Mackay et al., 2018a). However, it remained unclear whether a counselor's education had any impact on the closure rates of IDD clients.

More importantly, past research indicated that clients with disabilities were more likely to be employed in the secondary labor market, characterized by jobs with low wages, less security, and worse working conditions (Berger & Piore, 1980). Unfortunately, once people are placed in the secondary labor market, they have fewer chances of moving up to the primary labor market, characterized by high-quality jobs with high pay and more security. A recent systematic review suggested that although about 50% of IDD clients could find a job, only about 26% worked in an integrated working environment (Nevala, 2019). The rate of full time and competitively paid employment among persons with IDD may be less than 10% (Hiersteiner et al., 2016). The current RSA mission statement now stipulates the goal of vocational rehabilitation is to place the clients in a competitive-integrated market. Thus, to achieve financial independence and quality of life, clients with disabilities should find opportunities outside of service-based jobs. Therefore, measuring high-quality job closure rate (HQCR) is a more appropriate measure of the effectiveness of different degree types.

Further, consistent with the findings of Szymanski & Parker (1989), our previous study found that early career counselors (six-or-fewer years of experience) may benefit more from advanced training in RC. It appears that beyond six years of practice they may obtain additional rehabilitation knowledge and skills through the experience of providing services on a daily basis (Mackay, 2018). In other words, years of experience may compensate for lack of training in certain aspects of rehabilitation counseling. This finding warrants further study, as it has important implications in continual education among VR counselors. It is crucial to explore the specific differences in knowledge domains between MRC and RM counselors, particularly where there were significant differences in closure rates. Recently, Leahy et al. re-evaluated the curriculum domains for the CRCC examination and provided a detailed list of knowledge and skills that rehabilitation counselors should master (2013a; 2018b). This list included: mental health counseling, career development and job placement, job readiness and skills development, case management, medical and psychological aspects of chronic illness, theories about behavior and personality, research methodology and evidence-based practice, and group and family counseling. These factors were ordered by their relative importance to explain variations in the data. They also recommended 12 domains in the curriculum for the CRC examination. However, these studies placed emphasis on the tasks of counselors rather than client outcomes. Since it is unknown whether emphasizing specific knowledge domains will lead to improved employment outcomes among IDD clients, our study investigates the perception of preparedness to handle clients with IDD, the differences in the knowledge domains between counselors with MRC and RM and the impact to client employment outcomes.

Research Aims

Our previous research raised some concerns about counselor education and closure rates of clients with all disabilities. However, little is known about the impact of counselor education on outcomes of clients with IDD. This study will address the following research questions:

- **Research question 1 (RQ1):** Do counselors with a MRC have higher closure rates among clients with IDD than those with RM?

- **Research question 2 (RQ2):** Do counselors with an MRC have increased high quality job closure rates among clients with IDD compared to those with a RM?

- **Research question 3 (RQ3):** What are the differences in preparedness and knowledge domains between counselors with a MRC and those with a RM?

In RQ1 and RQ2, we also further explore the impact of a counselor's years of experience and clients' disability severity on the closure rates.

Method

This study was approved by the Institutional Review Board (IRB) of the authors' university prior to the study and official support from the rehabilitation agencies in the participating states was obtained: Connecticut (CT), Florida (FL), Idaho (ID), and Utah (UT).

Participants. We invited all VR counselors employed by participating states as of 2017. The current study only included those counselors who had clients with IDD (N=181). We limited counselors to those who had already earned a master's degree before the study and excluded those who had a bachelor's degree or were in training for a master's program. A total of 29 counselors were excluded from this analysis.

All IDD client cases closed during 2014 to 2017 fiscal years were included (N=7,878). We excluded those clients who were employed before counseling, died before the exit, aged 60 or above, were not impaired or not eligible at the time of exit, and/or had disability too severe at the exit. A total of 2,692 clients were excluded.

Measures and Procedures. The state rehabilitation agencies sent emails with links to the online survey to all of their employed counselors who chose to participate in the study. No incentives were provided to the participating counselors. The survey consisted of a 23-item questionnaire that included counselors' demographics, highest education and discipline, year of graduation, years of experience as a rehabilitation counselor, perceived preparedness for work as a rehabilitation counselor, and knowledge and concerns about rehabilitation counseling.

Of those counselors who completed the survey, the state rehabilitation agencies linked their case service records with counselors' information for the years 2014 to 2017. The same records were used for generating the RSA-911 reports. These individual case records included clients' demographics, closure status (employed or not), job title, working hours per week, and hourly wage. In addition, the client's disability type and severity were also included.

Data Analysis. As mentioned previously, the primary outcomes were client's closure status (employed or not), high-quality closure status (working 30 hours per week, i.e., full-time job, or earning a minimum of US $10.9 per hour, i.e., a “living wage”). The main independent variable is the counselor's highest education degree type (rehabilitation counseling vs. other related degrees). The important stratified variables were the counselor's years of experience (less than 6 years vs. 6 years or more) and the client's severity of disability (severe vs. more severe). Covariables included state, counselor's sex, age, and client's age and education.

Descriptive statistics were provided for describing the characteristics of counselors and their IDD clients. For RQ1 and RQ2, the comparisons of closure outcomes between MRC and RM counselors were based on adjusted risk differences.

Specifically, we employed a multilevel logistic regression to consider the fact that clients were clustered within counselors. The robust variance was used to obtain the proper standard error of estimates. The adjusted risk differences were obtained from the marginal probabilities of the logistic models. The marginal probabilities were calculated from the predicted probabilities and assumed all counselors either had a MRC or RM, according to the potential outcome-based causal framework (Rubin, 2015). Note that we use risk differences instead of risk ratios (a typical estimate in the logistic regression) because we are interested in the actual impact of counselor's education on client outcomes, as such impact is likely on the additive rather than multiplicative scale.

Furthermore, to assess the effects of a counselor's years of experience and client's disability severity status on closure rates, we performed separate multivariate models—according to these two variables—for all closure outcomes.

For RQ3, we combined the "not at all" and "a little" of knowledge preparedness as "not well prepared" with those "moderately well" and "a lot" as "well prepared." Counselor's degree types were compared with frequencies and proportions of knowledge preparedness with $\chi 2$ statistics.

All statistical analyses were conducted using Stata 16.1 (Stata LLC). A p-value of less than 0.05 was considered statistically significant. However, no multiple comparisons were adjusted.

Table 1: characteristics of counselors with IDD clients

	N	%
Total	152	100
State		
CT	23	15.13
FL	28	18.42
ID	32	21.05
UT	69	45.39
Sex		
Female	104	68.4
Male	48	31.6
Age (mean, SD)	36.9	12.9
Master's degree in Rehabilitation Counseling		
No	60	39.5
Yes	92	60.5
Years of experience (mean, SD)	8.4	5.7
More than six years of working experience		
No	74	48.7
Yes	78	51.3
Case load (median, IQR)	28	12 – 46
Master's degree major		
Rehabilitation counseling	84	55.26
Counseling with a spec. rehab	8	5.26
Counseling without a spec.	9	5.92
Psychology (clinical or counseling)	7	4.61
Psychology (other)	4	2.63
Special education	3	1.97
Education (Other)	4	2.63
Social work	9	5.92
Human development	6	3.95
Mental health counseling	6	3.95
Other	12	7.89

Results

Rehabilitation Counselors. As shown in Table 1, 152 counselors had clients with IDD during the study period—45% from UT and 68% female. The mean age of counselors was 37 (Standard deviation, SD: 13) years. The average years of experience were 8 years; about 51% had six or more years of experience. The median caseload of IDD clients was 26 (interquartile range: 12 - 46).

Furthermore, about 60% (n=92) had a master's degree in rehabilitation counseling (MRC), and the remainder had a master's degree in general counseling, psychology, social work, and others (RM).

Rehabilitation Clients. As shown in Table 2, the final sample included 5,186 IDD clients, 2/3rd of which were located in ID and UT. The mean age was 28 (SD: 11). About 86% were white and 8.6% of them were blacks. In addition, 2/3rd of the sample IDD clients had high school education or less and 53% had severe disabilities. At closure, only 31% of clients were employed. The average working hours per week were 28 (SD:12), and the average hourly wage was $10.2 (SD: $4.6). About 20% were employed in high-quality jobs (18.7% had full-time jobs with 30 or more working hours per week and 7.3% earned a living wage of $10.9 or more hourly).

RQ1: Differences in Closure Rates Between Counselors with a master's degree in Rehabilitation Counseling and Those with Degrees with Related Master's Degrees. As shown in Table 3, in the unadjusted model, the overall CR among clients of MRC was 32.9%, higher than 25.3% of RM but not statistically significant. However, when limiting comparison to clients without more severe disabilities, the CR among clients of MRC counselors was 35.1%, significantly higher than 25.0% of RM (p=0.03).

Similar findings existed when limiting to those counselors with six-or-fewer years of experience. Among clients without more severe disabilities, the CR difference was statistically significant (38.8% among MRC vs. 24.6% among RM, p=0.02). Further adjusting for counselor's age, sex, and client's education and age yielded similar results.

RQ2: Differences in High-Quality Closure Rates Between MRC and RM. Table 4 showed a statistically significant difference in HQCR between MRC and RM clients (23.5% in MRC vs. 18.2% in RM, p=0.03 for all clients). Further limiting clients to those without more severe disabilities showed a more significant difference in HQCR (30.7% in MRC vs. 22.5% in RM, p=0.01). In addition, among counselors with six-or-fewer years of experience, the patterns were similar. Adjusting for covariables showed similar results as those unadjusted.

The bottom part of Table 4 presented analyses separately for full-time jobs and living wage jobs. The differences in full-time job closure rates (FTCR) were statistically significant between clients of MRC and RM (22.0% in MRC vs. 16.0% in RM, p=0.007), and the difference was larger among clients without more severe disabilities (29.1% in MRC vs. 20.9% in RM, p=0.009). The pattern persisted when limiting to counselors with six-or-fewer years' experience and using adjusted models.

However, the living wage job closure rates (LWCR) were small and not significantly different between clients of MRC and RM (overall LWCR: 9.2% in MRC vs. 7.5% in RM, p=0.29)—nor among clients without more severe disabilities or among clients of counselors with six-or-fewer years' experience.

Table 2: characteristics of clients with IDD

	N	%
Total	5,186	100
State		
CT	814	15.7
FL	708	13.65
ID	1,710	32.97
UT	1,954	37.68
Age (mean, SD)	28	11
Race		
American Indian or Alaska Native	90	1.74
Asian	63	1.21
Black or African American	447	8.62
Multiracial	87	1.68
Unknown	23	0.44
White	4,476	86.31
Education at application		
Elementary education	216	4.17
Secondary education, no HS degree	1,442	27.81
HS degree or equivalent	1,868	36.02
Post-secondary, no degree	390	7.52
Associate degree or vocation/tech	148	2.85
Special education	695	13.4
Bachelor or above	281	5.42
Other	146	2.82
Current student at application		
No	4,416	85.15
Yes	770	14.85
Severe disability status		
Less severe	2,414	46.55
More severe	2,772	53.45
Employed at closure		
No	3,560	68.65
Yes	1,626	31.35
Weekly hour working if employed (mean SD)	27.8	12.1
Hourly wage if working (US $, mean, SD)	10.2	4.6
High quality employment	1,040	20.05
Full time job (30+ hours/week)	971	18.72
Living wage job (>=$10.9/hour)	376	7.25

Table 3: Differences in closure rates between clients of MRC and of RM

			Unadjusted model			Adjusted model		
Counselor experience	**Outcome variable**	**Group**	**Closure rate**	**Rate difference (95%CI)**	**p value**	**Adjusted closure rate**	**Rate difference (95%CI)**	**p value**
All years	CR for all clients	MRC RM	32.9% 25.3%	7.6% (-1.1%, 16.3%)	0.09	32.7% 25.5%	7.2% (-1.4%, 15.8%)	0.11
	CR for clients with less severe disabilities	MRC RM	35.1% 25.0%	10.1% (0.9%, 19.3%)	0.03	36.5% 26.5%	10.1% (1%, 19.1%)	0.03
Six or fewer years	CR for all clients	MRC RM	36.2% 28.5%	7.7% (-4.3%, 19.6%)	0.21	36.1% 29.3%	6.7% (-4.9%, 18.4%)	0.29
	CR for clients with less severe disabilities	MRC RM	38.8% 24.6%	14.1% (1.9%, 26.4%)	0.02	40.1% 26.3%	13.8% (1.8%, 25.9%)	0.02

Adjusted model includes counselor's age and sex, client's age, race, education level and disability severity

RQ3: Differences in Preparedness, Knowledge, and Skills between Master's in Rehabilitative Counseling and Related Masters. Counselors with MRC were more likely to report being prepared to handle IDD clients than those with RM (Table 5). About 37% and 38% of MRC reported "very well" and "extremely well" prepared, while only 33.3% and 16.7% of RM reported so, respectively (p=0.003). A detailed exploration of knowledge domain showed that counselors with MRC reported significantly higher percent of well preparedness in "Medical and Psychosocial Aspects of Chronic Illness and Disability," "Career Development and Job Placement," "Health Care and Disability Management," and "Crisis and Trauma Invention" than those with RM (all p <0.001; Table 6). There was no significant difference in other knowledge domains.

Table 4: differences in high quality closure rates (HQCR) between IDD clients of counselors with MRC and RM

			Unadjusted model			Adjusted model		
Counselor experience	**Outcome variable**	**Group**	**Closure rate**	**Rate difference (95%CI)**	**p value**	**Adjusted closure rate**	**Rate difference (95%CI)**	**p value**
High quality employment (full time 30+ hour/week or wage >=$10.9 per hour)								
All years	CR for all clients	MRC	23.5%	5.3% (0.5%, 10.2%)	0.03	22.0%	3.9% (0.04%, 7.8%)	0.05
		RM	18.2%			18.0%		
	CR for clients with less severe disabilities	MRC	30.7%	8.2% (1.6%, 14.9%)	0.01	31.9%	7.9% (1.5%, 14.4%)	0.02
		RM	22.5%			23.9%		
Six or fewer years	CR for all clients	MRC	23.6%	6.6% (-0.4%, 13.6%)	0.06	22.0%	5.1% (-0.3%, 10.4%)	0.07
		RM	17.0%			16.9%		
	CR for clients with less severe disabilities	MRC	32.4%	10.0% (1.0%, 19.0%)	0.03	33.1%	9.0% (0.3%, 17.8%)	0.04
		RM	22.5%			24.0%		
Full time job (30+ hours/week)								
All years	CR for all clients	MRC	22.0%	6.0% (1.7%, 10.3%)	0.007	20.7%	4.6% (1.1%, 8.1%)	0.009
		RM	16.0%			16.1%		
	CR for clients with less severe disabilities	MRC	29.1%	8.2% (2.1%, 14.3%)	0.009	30.4%	8.1% (2.1%, 14.1%)	0.008
		RM	20.9%			22.2%		
Six or fewer years	CR for all clients	MRC	21.9%	6.4% (0.2%, 12.6%)	0.04	20.7%	5.2% (0.3%, 10.1%)	0.04
		RM	15.5%			15.5%		
	CR for clients with less severe disabilities	MRC	30.5%	9.3% (1.1%, 17.4%)	0.03	31.4%	8.8% (0.8%, 16.8%)	0.03
		RM	21.2%			22.6%		

Living wage job (>=$10.9 /hour)								
All years	CR for all clients	MRC	9.2%	1.7% (-1.5%, 4.8%)	0.29	7.8%	0.6% (-1.7%, 2.8%)	0.63
		RM	7.5%			7.3%		
	CR for clients with less severe disabilities	MRC	13.0%	2.6% (-1.1%, 6.3%)	0.17	13.1%	1.8% (-1.7%, 5.2%)	0.33
		RM	10.4%			11.3%		
Six or fewer years	CR for all clients	MRC	8.9%	1.5% (-2.4%, 5.3%)	0.46	7.8%	0.0% (-2.8%, 2.8%)	0.99
		RM	7.4%			7.8%		
	CR for clients with less severe disabilities	MRC	13.7%	3.2% (-1.9%, 8.2%)	0.22	13.7%	1.6% (-3.4%, 6.5%)	0.53
		RM	10.5%			12.2%		

Adjusted model includes counselor's age an sex, client's age, race, education level and disability severity

Table 5: preparedness of knowledge and skills in handling IDD clients

	Preparedness, n (%)				
Counselor Degree	**Slightly well**	**Moderately well**	**Very well**	**Extremely well**	**Total**
MRC	3 (3.3%)	20 (21.7%)	34 (37.0%)	35 (38.0%)	92
RM	8 (13.3%)	22 (36.7%)	20 (33.3%)	10 (16.7%)	60
Total	11 (7.2%)	42 (27.6%)	54 (35.5%)	45 (29.6%)	152

Pearson chi2(3) = 13.7595, P = 0.003

Table 6: percent of reporting "well prepared" in knowledge domains between counselors with MRC and RM

Knowledge domain	Degree		p value
	MRC	RM	
Professional Orientation and Ethical Practice	69 (75%)	37 (61.67%)	0.24
Counseling Theories, Techniques, and Evidence-Based Practice	66 (71.74%)	42 (70%)	0.13
Group and Family Counseling	25 (27.17%)	26 (43.33%)	0.15
Crisis and Trauma Counseling and Interventions	22 (23.91%)	27 (45%)	0.05
Medical and Psychosocial Aspects of Chronic Illness and Disability	69 (75%)	22 (36.67%)	0.0001
Assessment, Occupational Analysis, and Service Implementation	38 (41.3%)	22 (36.67%)	0.13
Career Development and Job Placement	36 (39.13%)	16 (26.67%)	0.0001
Demand-Side Employer Engagement	14 (15.22%)	6 (10%)	0.12
Community Resources and Partnerships	29 (31.52%)	16 (26.67%)	0.87
Case Management	37 (40.22%)	21 (35%)	0.5
Health Care and Disability Management	37 (40.22%)	9 (15%)	0.0001
Research, Methodology, and Performance Management	46 (50%)	32 (53.33%)	0.53

Discussion

This study found that counselors with a MRC had higher closure rates for IDD clients with less severe disabilities than those with a RM. Further, a MRC is more likely to have high-quality closure rates (especially full-time job closure rates) than a RM. We also noticed that counselors with a MRC were more likely to be prepared for managing IDD clients. The main advantages of counselors with a MRC in knowledge domains was related to medical and psychological aspects of disability, career development, and disability management.

This study also affirmed our previous findings that the severity of disabilities and counselors' years of experience were important in determining employment outcomes (McKay et al., 2018). With a larger sample size and more diverse counselor backgrounds, we found that the effects of counselor education on employment outcomes, especially for high-quality jobs (e.g., full-time jobs) were consistent across clients' disability severities and counselors' work experience. Thus, specialized training in rehabilitation counseling may provide additional assurance in improving employment outcomes among clients.

Working can bring unique meanings to a person's life, particularly for those with IDD. A recent review on employment outcomes among people with IDD showed that most studies demonstrated that employment positively impacts a person's self-

respect and self-assurance, regardless of whether the employment is in a sheltered supported or competitive environment (Almalky, 2020). Although persons with IDD may have unique challenges in the competitive integrative environment, as Wehman (2018) points out, persons with IDD can work competitively. To be successful, however, they often require workplace and family supports, more training in job skills, and opportunities for internship and work-based learning. In a recent systematic review, Nevala et al. (2019) summarized over thirty studies, including both quantitative and qualitative studies, concluding that people with IDD could increase opportunity for employment through secondary education, especially with emphasis on the acquisition of job skills provided through specialized teaching methods. In a randomized clinical trial, in which high school age youth with autism were randomly assigned to receive either intervention with structured support and internship or no intervention, those in the intervention group had significantly higher percentages of obtaining employment after graduation than those in the control group (Wehman et al., 2020). Our study shows that clients of MRC counselors were more likely to obtain high-quality jobs, especially full-time jobs, than those of RM counselors.

The current study provides even stronger evidence to support rehabilitation counseling education than our previous reports and raises more concerns in the knowledge gaps demonstrated by counselors with a RM. We found that counselors with MRCs were more likely to report being prepared to handle clients with IDD than those with RMs, suggesting that some aspects of training in rehabilitation counseling may provide more confidence for counselors, especially for those new counselors with six-or-fewer years of experience. As indicated in our study, MRC counselors reported being more prepared in knowledge and skills such as medical and psychological management, career development, and job placement, allowing them to feel more confident to manage the needs of clients with IDD.

The essential competencies of rehabilitation counseling have recently been re-evaluated (Leahy et al., 2018). Through surveying practicing counselors, the study confirmed the importance of traditional knowledge areas such as medical and psychological knowledge of chronic illness, job development, etc., and provided a detailed list of the updated knowledge domains for inclusion in CRC examination. These findings were similar to those of our outcome-based analysis.

In addition, from the outcome perspective, the most important factors are job and social skills. These skills are available through secondary education and working in a competitive integrated environment (Nevala, 2019). In an intervention study of 126 students with disabilities, those who received direct skill training reported better preparation for the interview process and transitioning into the job placement (Ousler, 2019). A meta-analysis on the job-related social skill training also suggested that direct instruction at schools had the largest effect on obtaining social skills among people with disabilities (Park et al., 2016). Furthermore, a close bond between clients and counselors developed through the work-alliance framework may help persons with IDD follow through the rehabilitation process and build necessary skills in work and social interactions (Lustig, 2002; Phillips, 2014). This supports increasing CR knowledge confidence in the early years, as it will aid in the develop of a strong client/counselor relationship. RC based on the work-alliance model has been shown to improve employment outcomes among clients with disabilities, including those with IDD (Lustig, 2002). Therefore, a curriculum for training counselors should emphasize knowledge about job skills, job placement, and social skills, as suggested in both our study and in the recent evaluation of CRCC exam domains (Leahy, 2018).

Our study had several strengths. We included counselors from four states, leading to a more diverse background of counselors and their clients. We focused on the closure rates in IDD clients with

a larger sample size. In addition, our statistical analyses were based on the causal inference framework and used multilevel logistic models to account for the clustering of clients to counselors. Our adjusted and unadjusted models showed similar results, strengthening the internal validities of our findings. Finally, the current study addressed the needs of helping IDD clients to obtain high-quality jobs, which are more likely in a competitive integrative environment. This is an urgent issue of vocational rehabilitation in the twenty-first century.

Limitations of our study are evident. First, the number of counselors who managed IDD clients were few and—although non-response rates were small in Utah—the non-response rates were higher in Connecticut and Florida. Additional studies based on more states—and more diverse counselors and clients—will provide stronger evidence for the need for new training for counselors. Second, although we excluded the variables of clients who were less likely to be employed due to age, more severe disabilities, etc., many clients might not be employed at the exit for reasons beyond the capabilities of counselors. Third, the rates of living-wage employment were low among IDD clients of both MRC and RM counselors. This could be due to most job placements being in the service industry (Wehman et al., 2020). Therefore, given that more and more jobs are computerized and automated, the current job market is more competitive and requires more mental demands than before. Further research is necessary to address this urgent need for counselors to facilitate these complex transitions. Fourth, we did not know the client's health conditions, skills, social support, and their community environment. Fifth, our closure rates were broadly defined, and it might be desirable to study different types of jobs in addition to overall CR and HQCR. Finally, our results should be replicated in other states and among clients with other socio-demographic characteristics.

In summary, an MRC may allow counselors to better manage clients with IDD than a RM. The closure rates, especially high-quality job closure rates, were higher among counselors with a master's degree in rehabilitation counseling than those with degrees in other disciplines. Vocational rehabilitation agencies and education institutes should provide additional and more targeted training to counselors to prepare for the challenge of placing their clients into a competitive integrative environment. The pre-service and continuing education curricula should be developed based on outcome and tailored to the needs of both clients and counselors in the current digital age.

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Admissibility of Vocational Opinions and Vocational Apportionment Revisited: Implications of Recent Court Decisions on the Evaluation of Employability and Earning Capacity

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Abstract. *This article summarizes significant court decisions regarding the admissibility of vocational opinions after Senate Bill 863 (2012). Significant court decisions regarding vocational apportionment are also summarized. Implications for practice are described, which incorporate the judicial guidance in the court decisions.*

Regarding the admissibility of vocational opinions, Van de Bittner and Moeller (2016) presented methods for rebutting a scheduled rating after California Senate Bill 863 (2012). SB 863 addresses employees injured on or after January 1, 2013. No court decision regarding the admissibility of vocational opinions had been issued at the time that article was written. Since then, several court decisions have been rendered on this topic. The decisions will be summarized below, along with a summary of two more general court decisions related to the rebuttal of a scheduled rating with vocational opinions.

Regarding vocational apportionment, Van de Bittner (2015) wrote:

Vocational apportionment refers to a pre-existing or non-industrial medical factor or a non-industrial vocational factor that impacts an applicant's or plaintiff's employability or earning capacity. (p. 7)

The methods by which vocational experts analyze vocational apportionment has continued to evolve in relation to recent court decisions. Several significant court decisions regarding medical and vocational apportionment will be summarized following the court decisions on the admissibility of vocational opinions after SB 863 (2012). The primary focus of the discussion of admissibility of vocational opinions and vocational apportionment in this article is the California workers' compensation system. However, the same or similar issues apply to other state workers' compensation systems and can apply to other venues.

Admissibility Defined and Admissibility of Evidence

According to Black's Law Dictionary (Garner, 1999), "admissibility" is defined as, "The quality or state of being allowed to be entered into evidence in a hearing, trial, or other proceeding" (p. 50). Regarding vocational expert evidence in California workers' compensation matters, Labor Code section 5703(j), Melchoir (2021) states, "If vocational expert evidence is otherwise admissible, the evidence shall be produced in the form of written reports" (p. 356). Regarding the California Superior Court, Evidence Code of California section 350 (Hoover, 2007) states, "No evidence is admissible except relevant evidence" and that, "Except as otherwise provided by statute, all relevant evidence is admissible" (p. 7). According to Rule 402 of the Federal Rules of Evidence (Cornell Law School, 2021), relevant evidence is admissible unless provided otherwise by the United States Constitution, a federal statute, the

Federal Rules of Evidence, or other rules prescribed by the United States Supreme Court.

Admissibility Court Decisions

There have been court decisions in five California workers' compensation cases that addressed the admissibility of vocational evidence for work injuries that occurred on or after January 1, 2013. They will be discussed in chronological order.

In Cardenas v. Hayward Sisters Hospital (2017), the workers' compensation judge (WCJ) found that both vocational experts in the case had provided reports that would have been considered probative evidence in a case involving an injury before January 1, 2013. But, the

WJC also found that vocational evidence could not be considered because Labor Code Section 4660.1 in SB 863 (2012) did not state, specifically, that diminished ability to compete in an open labor market or diminished future earning capacity could be considered in determining the percentage of permanent disability for an injured worker. Additionally, the WCJ wrote that vocational evidence could not be considered in reference to the injured worker's claim for permanent total disability under Labor Code section 4662(b), since he was precluded from considering vocational opinions (Melchoir, 2021).

In Morgan v. Saint Mary's Medical Center (2018), the WCJ determined that vocational reports were not subject to exclusion from evidence if the case-in-chief proceeds to trial on a future date. The WCJ deferred a decision on the admissibility of vocational expert reports until the time of trial in the case-in-chief. The applicant (injured worker) was permitted to obtain a report from a vocational expert. The WCJ noted that a scheduled rating under Labor Code section 4660.1 was rebuttable and noted and, further, that vocational evidence (vocational expert reports and opinions) was relevant in reference to Labor Code section 4662 (Melchoir, 2021; LeBoeuf v. WCAB, 1983).

In Hanus v. URS/AECOM Corporation (2018), a panel decision (involving three commissioners by the Workers' Compensation Appeals Board (WCAB) denied the defendant's Petition for Reconsideration when it found that Labor Code section 4660.1 did not preclude rebuttal of a scheduled rating with vocational evidence (Melchoir, 2021). The WCJ also determined that the applicant was 100% disabled based on an individualized vocational assessment that included medical and vocational factors in reference to Contra Costa County v. WCAB and Doreen Dahl (2015).

In Hennessey v. Compass Group (2019), another panel decision, the WCAB found that the applicant could use vocational evidence in an attempt to rebut a scheduled permanent disability rating for a work injury occurring on or after 1/1/2013 pursuant to Labor Code section 4660.1 (Melchoir, 2021). The WCAB rejected the defendant's assertion that removing language in this section regarding diminished future earning capacity caused vocational evidence to be irrelevant and inadmissible. The WCAB explained that Labor Code section 4660.1 standardized the adjustment factor for diminished future earning capacity from a range of 1.1-1.4 to 1.4 for all injuries, which supported the admissibility of vocational expert reports for an injury on or after 1/1/2013.

In The Conco Companies v. WCAB (Sandoval, 2019), a petition for writ of review denied decision, the WCAB affirmed the WCJ's finding that there was no basis for the defendant's objection to the admissibility of the applicant's vocational expert's report in relation to a 1/23/2015 work injury. The WCAB rejected the defendant's assertion that changes in Labor Code section 4660 regarding diminished future earning capacity made vocational evidence irrelevant and inadmissible (Melchoir, 2021). Labor Code section 4660.1 standardized to 1.4 the adjustment factor for diminished future earning capacity. A petition for writ of review was denied by the Court of Appeal for several reasons. The issue regarding

admissibility of vocational evidence was not raised first at trial but in a request for reconsideration. Additionally, the argument was found meritless in reference to Labor Code section 5703(j) and California Code of Regulation section 10606.5 (Melchoir, 2021).

In County of Alameda v. WCAB (Williams, 2020), a petition for writ of review denied decision, the WCAB affirmed the WCJ's finding that the applicant, who was injured on 8/4/2015, was 100% disabled in reference to Ogilvie v. WCAB (2011) and LeBoeuf v. WCAB (1983), based on a combination of medical and vocational evidence. The WCAB found that Labor Code section 4660.1 did not preclude consideration of vocational evidence in attempting to rebut a scheduled disability rating (Melchoir, 2021).

In State Compensation Insurance Fund v. WCAB (Ortega, 2020), another petition for writ of review denied decision, the WCAB affirmed the WCJ's award of 80% permanent disability, after psychiatric apportionment, based on the opinions of the psychiatric agreed medical evaluator (AME) and the applicant's vocational expert. In addition, the WCAB cited The Conco Companies v. WCAB (Sandoval, 2019) and Hennessy v. Compass Group (2019), agreeing with the WCJ that vocational evidence is admissible and may be considered by the WCAB in determining an injured worker's ability to participate in vocational rehabilitation pursuant to LeBoeuf v. WCAB (1983).

There are two additional court decisions that have general applicability to the admissibility of vocational evidence. The first is Department of Corrections and Rehabilitation v. WCAB (Fitzpatrick, 2018), which concluded that Labor Code section 4662(b) did not provide a second path to argue permanent total disability (Melchoir, 2021). Any claim for permanent total disability is subject to Labor Code section 4660 (Melchoir, 2021). Mr. Fitzpatrick was injured on 12/7/11. Therefore, his claim falls under the 2005 Schedule for Rating Permanent Disabilities (California Division of Workers' Compensation, 2005). The Court of Appeal in Fitzpatrick (2018) did not state whether its findings apply to injuries on or after 1/1/2013.

Another court decision that has general applicability to the issue of admissibility of vocational evidence is The People v. Marcos Arturo Sanchez (2016), a California Supreme Court decision that rejected part of the testimony of a gang expert in a criminal case because it represented case-specific hearsay evidence. Van de Bittner and Moeller (2019) explained how Sanchez (2016) impacted the admissibility of the opinions of vocational experts. Van de Bittner, Moeller, and Van de Bittner (2019) presented a labor market opportunity analysis as a method for analyzing the labor market for an evaluee in a manner that is not case specific.

In summary, a review of the above court decisions has revealed that the WCAB considers vocational expert opinions relevant and admissible for applicants with a work injury on or after 1/1/2013. A petition for writ of review was denied by the Court of Appeal in the three most recent court decisions. Except for one trial judge decision, no court decisions were identified for the WCAB or the Court of Appeal that rejected the admissibility of vocational evidence for an applicant injured on or after 1/1/2013.

This concludes the discussion of recent court decisions that address the admissibility of vocational evidence for an applicant with an injury on or after 1/1/2013. The next section will focus on recent court decisions that address medical apportionment and vocational apportionment.

Apportionment Court Decisions Regarding Medical Opinions

In the review of recent court decisions that address apportionment, there are four recent court decisions that address medical apportionment. Following a discussion of these four court decisions is a review of 21 recent court decisions that address vocational apportionment.

In City of Jackson v. WCAB (Rice, 2017), a Court of Appeal decision, the qualified medical evaluator (QME) apportioned 49% of the applicant's permanent disability to heredity, genetics, and other personal history factors. The Court of Appeal concluded that the QME's reports were more than sufficient to meet the standard of substantial medical evidence. After comparing the reports of the QME with the findings in prior court decisions, the Court of Appeal explained, "Again, we see no relevant distinction between apportionment for a preexisting disease that is congenital and degenerative, and apportionment for a preexisting degenerative disease caused by heredity or genetics" (p. 8).

In Hikida v. WCAB (2017), a Court of Appeal decision, the applicant developed chronic regional pain syndrome (CRPS) from surgery for her carpal tunnel condition. The agreed medical evaluator (AME) found non-industrial apportionment for the carpal tunnel condition. However, the AME concluded that the applicant was permanently and totally disabled entirely because of the effects of the CRPS. The Court of Appeal ruled that any disability arising directly from the carpal tunnel surgery was not apportionable. Therefore, the applicant was found to be 100% disabled, without apportionment.

In City of Petaluma v. WCAB (Lindh, 2018), a Court of Appeal decision, the applicant sustained a head injury. The QME concluded that 85% of the applicant's permanent disability was due to a previously asymptomatic, underlying condition, and 15% of the applicant's permanent disability was due to the work injury. The WCJ rejected the QME's apportionment analysis and found 40% permanent disability without apportionment. The WCAB affirmed the WCJ's decision. However, the Court of Appeal ruled that apportionment is required if the disability resulted from both non-industrial and industrial causes and reinstated the QME's opinion on apportionment. The applicant's claim that there could be no apportionment to a preexisting condition was rejected.

In County of Santa Clara v. WCAB (Justice, 2020), another Court of Appeal decision, the applicant sustained an injury to both knees following a fall at work. The applicant had total knee replacement surgery on both knees. The AME reported significant pre-injury degeneration in both knees and that the need for surgery was a result of underlying arthritis. Therefore, the AME opined that 50% of the bilateral knee disability was due to non-industrial degeneration in the knees. But the WCJ cited Hikida (2017) and awarded permanent disability with no apportionment. The WCAB upheld the decision by the WCJ. However, the Court of Appeal found that apportionment of permanent disability was required, citing Lindh (2018), and explained that this case differed from Hikida (2017). The permanent disability in this case was not caused entirely by the industrial medical treatment. The Court of Appeal agreed with the AME's opinion on apportionment.

This concludes the review of recent significant court decisions involving medical apportionment. Next is a review of recent court decisions involving vocational apportionment, issues that address apportionment of employability, earning capacity, and amenability to rehabilitation.

Apportionment Court Decisions Regarding Vocational Opinions

This section begins with a review of Kirkwood v. WCAB (2015), in which a petition for writ of review was denied by the Court of Appeal. The applicant suffered a work injury to her right upper extremity and psyche. She had a prior non-industrial injury to her cervical spine and a below-the-elbow amputation of her left arm. Both parties retained vocational experts. The WCJ found permanent disability of 100%, without apportionment. The WCAB rescinded the WCJ's opinion and found that the report of the applicant's vocational expert was insufficient rebuttal evidence because the vocational expert disregarded the impact of the applicant's preexisting, non-industrial amputation on her overall level of disability. The applicant appealed the WCAB's

decision, and reconsideration was denied. The WCAB also explained that it was not necessary that the applicant's pre-existing amputation interfered with her ability to work at her job at the time of her subsequent injury in order for apportionment to apply.

In Flowserve Corporation v. WCAB (Espinoza, 2016), a writ of review denied decision, the applicant sustained an injury to his right shoulder, left knee, left lower extremity, and back. He also had a cumulative trauma (CT) injury to his bilateral shoulders, left knee, left lower extremity, back, and right knee. The applicant had industrial and non-industrial factors of disability that precluded him from returning to work, including his age; limitations on sitting, standing, and lifting; his limited education in Nicaragua; lack of transferable skills; and lack of stamina. The vocational expert doubted whether training could be completed or whether any employment could be sustained, given the applicant's lack of stamina. The vocational expert explained that the applicant's total loss of earning capacity was attributable to the industrial injuries. The WCJ relied on the opinion of the vocational expert to conclude that the applicant was 100% disabled. The WCAB affirmed the WCJ's decision.

In Winningham v. WCAB (2016), a writ of review denied decision, the applicant sustained an injury to his brain, central nervous system, psyche, eye, digestive system, and cognitive system, and sustained medical conditions including meningitis, headaches, and vertigo. He also had a non-industrial brain tumor. The WCJ determined that the AMEs described apportionment appropriately. However, the WCJ did not rely on the applicant's vocational expert's report because it did not adequately discuss apportionment. The WCAB affirmed the WCJ's decision.

In Edwards v. WCAB (2016), a writ of review denied decision, the WCAB affirmed the WCJ's decision that the applicant's vocational expert relied on impermissible vocational factors in opining that the applicant was 100% disabled. The WCJ noted that the vocational expert's opinion was based in part on impermissible factors, including the applicant's subjective complaints, significant academic and intellectual limitations, and a history of primarily unskilled work.

In Target Corporation v. WCAB (Estrada, 2016), a writ of review denied decision, the applicant sustained a CT injury to his low back, neck, left knee, bilateral shoulders, lower extremities, thoracic spine, left elbow, left forearm, left wrist, stomach, and psyche, and sustained medical conditions including sleep disturbance, diabetes, and hypertension. The WCJ relied on the opinions of the applicant's vocational expert in determining that the applicant was 100% disabled, without vocational apportionment. The WCJ stressed that an apportionment analysis is required and that it should be a separate, vocational analysis and should not rely exclusively on each medical cause of impairment. The vocational expert indicated that there was no medical opinion that non-industrial medical problems would have terminated or shortened the applicant's work life. The WCJ found no substantial medical evidence supporting non-industrial apportionment.

In Rodriguez v. YRC Worldwide (2017), the applicant's vocational expert reported that the applicant was 100% disabled because of the impact of medication usage. The WCJ relied on this opinion to find permanent total disability. But the WCAB disagreed because the applicant used medication for both industrial and non-industrial conditions. The case was returned to the trial level for further development of the medical record regarding the effects of the industrial medications used by the applicant on his permanent disability.

In Singh v. State of California (2017), a panel decision, the applicant's vocational expert opined that the applicant was unable to compete in the open labor market based on the effects of two specific work injuries, a cumulative trauma injury, and vocational factors affecting employability. The WCJ awarded 100% permanent disability. However, the WCAB determined that the

vocational expert's opinions did not constitute substantial evidence since the vocational expert's report failed to address whether the applicant's diminished future earnings were directly attributed to the applicant's work-related injury and not due to non-industrial vocational factors, such as proficiency to speak English and lack of education. Additionally, the applicant's vocational expert did not address the applicant's ability to participate in vocational rehabilitation. The WCAB amended the WCJ's decision and found 53% permanent disability for the first injury, 47% permanent disability for the second injury, and 67% permanent disability for the cumulative trauma injury, for a combined permanent disability of 95%.

In Gibbs v. State of California (2018), a panel decision, the WCAB found that the applicant was 100% disabled based on the opinions of the orthopedic AME with the opinions of the applicant's vocational expert, despite 10% apportionment of permanent disability to preexisting spondylolisthesis. The WCAB concurred with the WCJ's finding that there was no legal basis for apportionment since the orthopedic AME did not provide an explanation for his apportionment determination. Also, the AME in psychology did not adequately identify the basis for apportionment. Therefore, the vocational expert was not required to consider the apportionment determinations of the orthopedic AME or the apportionment determinations of two other AMEs.

In Sandoval v. WCAB (2018), a petition for writ of review denied decision, the WCJ rejected the report of the applicant's vocational expert. The applicant could not speak, write, or read English and had limited education. The vocational expert determined that these non-industrial factors, in combination with industrial factors, made the applicant unemployable. The WCJ concluded that the applicant did not meet his burden of proving that he was 100% disabled due solely to his industrial injury. The WCAB wrote that the applicant was required to show that his diminished future earning capacity was entirely due to his industrial injury. Because the vocational expert included impermissible non-industrial factors in determining vocational non feasibility, the expert's report did not rebut the scheduled rating.

In Ramirez v. Alco Iron & Metal Co., Inc. (2018), a panel decision, the WCJ found that the applicant was 100% disabled based on the opinions of the applicant's vocational expert and one scenario of a transferable skills analysis conducted by the defense vocational expert. Regarding apportionment of impermissible non-industrial vocational factors, the WCJ rejected the defense vocational expert's comparison of pre-injury and post-injury earning capacity, expected earnings without impermissible non-industrial vocational factors. The WCJ explained that a vocational analysis needs to be individualized. The WCJ wrote,

The proper analysis for determining the industrial loss of earnings/job market access post-industrial injury follows:

1. What was applicant's labor market access/earnings capacity pre-injury including all non-industrial factors (i.e., education, skill, literacy, economic conditions)?

2. What is applicant's labor market access/earnings capacity post-injury including all non-industrial factors (i.e., education, skill, literacy, economic conditions)?

3. What is the ratio of the above? (p. 11)

The WCJ emphasized that analysis post-injury must focus on damages caused by the injury. The WCJ provided the example of an unskilled applicant with pre-injury labor market access of 20% and post-injury labor market access of 15%. This would result in 25% permanent disability—not 85% permanent disability. A further analysis of diminished future earning capacity would be required, depending on the date of injury.

In Hennessy v. Compass Group (2019), a panel decision, the WCJ found that the applicant's vocational expert's reports did not constitute substantial evidence to rebut a scheduled permanent disability rating because the vocational expert did not explain whether medical apportionment was considered and how it affected the expert's conclusions. This court decision was discussed above in the Admissibility Court Decisions section.

In Bagobri v. AC Transit (2019), a petition for reconsideration was denied by the WCAB. The WCJ concluded that the applicant was 100% disabled, without apportionment, and explained that an individualized vocational assessment is necessary. The WCJ found that the opinion of the defense vocational expert, which was essentially an opinion on vocational apportionment, was not based on substantial evidence. Among other things, the defense vocational expert wrote that it was not possible to apply apportionment to work restrictions. Instead of analyzing the applicant's actual work restrictions, as provided by the functional capacity evaluation, the vocational expert modified the applicant's work restrictions to create work restrictions that the expert believed were a result of the industrial injury. The WCJ noted that since the expert's opinion was not based on the facts in the case, the vocational expert's opinion could not be followed.

In Zmek v. State of California (2019), a petition for reconsideration was denied by the WCAB. The WCAB affirmed the WCJ's finding that the applicant was 100% disabled, based on the opinions of the AME and the applicant's vocational expert. The WCJ disregarded the AME's opinion that there was 40% non-industrial apportionment. The WCJ also found the applicant's vocational expert's analysis of vocational apportionment to be more persuasive than the defense vocational expert's analysis. The WCJ explained that the defense vocational expert did not clarify why non-industrial factors were applicable to the total disability based on LeBoeuf (1983). The defendant did not meet its burden of proving non-industrial apportionment. For example, the defendant did not produce any medical evidence of work restrictions attributed to non-industrial medical factors of disability.

In Allstate Insurance Company v. WCAB (Monrial, 2020), a petition for writ of review denied decision, the WCJ awarded 91% permanent disability. However, the WCAB increased the award to 100% based on the opinions of the orthopedic AME and the applicant's vocational expert. The orthopedic AME concluded that the applicant was 100% disabled orthopedically and that permanent disability was 100% industrial. The applicant's vocational expert completed an individualized assessment and concluded that the applicant was unable to return to work in the open labor market, had no future earning capacity, and was not amenable to rehabilitation, without vocational apportionment. The opinions of the vocational expert were based on the results of the individualized assessment and relied on the orthopedic AME's opinion that all orthopedic impairments were industrial.

In United States Fire Insurance Company v. WCAB (Bernasani, 2020), a petition for writ of review denied decision, the WCAB affirmed the WCJ's award of 100% permanent disability. The orthopedic AME and the applicant's vocational expert concluded that the applicant was unable to return to gainful employment due to a limitation to sedentary work combined with a need for housekeeping services, transportation assistance, reliance on a cane, the use of prescription medication, and lack of transferable skills. The applicant's vocational expert concluded that the applicant was 100% disabled based solely on her work-related orthopedic limitations since the applicant's non-orthopedic impairments did not limit her ability to work in the same manner as her orthopedic impairments.

In The Kroger Company dba Ralphs Grocery Company v. WCAB (Melton, 2020), a petition for writ of review denied decision, the WCAB

affirmed the findings of the WCJ that the applicant was 100% disabled based on the opinions of the AME and the applicant's vocational expert. The WCAB noted that the defendant had the burden of proving apportionment and the defendant did not meet this burden. The WCAB determined that 15% apportionment of fibromyalgia to non-industrial factors found by the AME was not substantial evidence since there was no evidence in the record that the applicant's pre-existing fibromyalgia had any effect on her earning capacity, and there was substantial evidence that the applicant's inability to participate in vocational rehabilitation was solely industrial.

In Culver v. Initiative Foods (2020), a panel decision, the WCJ found the applicant to be 100% disabled based on the opinion of a court-appointed independent vocational expert (IVE). The IVE concluded that the applicant was not amenable to vocational rehabilitation and had lost her earning capacity. Regarding vocational apportionment, the IVE found no vocational impact from pre-existing or non-industrial medical conditions in terms of physical or psychiatric impairment. The IVE determined that the applicant's diminished ability to compete in the labor market was solely due to the applicant's work injury.

In Winn v. O.G. Packing Company, Inc. (2020), a panel decision, the WCAB amended the decision by the WCJ to find the applicant was 100% disabled, with apportionment to non-industrial causes. The case was returned to the WCJ for a final award of permanent disability after apportionment. The WCJ found that the applicant's vocational expert's report failed to reflect that the applicant was amenable to rehabilitation, since he had completed a vocational rehabilitation plan in 2006 and because the expert did not appropriately apply the current apportionment standards. The neurology AME found 20% apportionment to pre-existing nonindustrial factors. The psychiatry evaluator found 25% apportionment to non-industrial factors. The WCJ found the applicant's vocational expert's opinion was not substantial evidence, in part because the expert failed to consider the 20% neurological apportionment and 25% psychiatric apportionment. The WCAB did not agree with the WCJ's determination that the applicant was amenable to rehabilitation since he was able to participate in vocational rehabilitation 10 years earlier. The WCAB concluded that the applicant was 100% disabled, but for apportionment to non-industrial neurological factors. The WCAB decided not to rely on the apportionment opinion of the psychiatric evaluator in determining the extent of the applicant's permanent disability. Therefore, the WCAB reduced the applicant's 100% permanent disability by 20%, guided by the 20% apportionment found by the AME in neurology.

In Braziel v. Money Mailer of Agoura (2020), a panel decision, the WCJ found the applicant to be 100% disabled due to an injury to her cervical spine, right shoulder, sleep, and psyche. The WCAB affirmed the WCJ's decision. The WCAB concluded that the applicant's vocational expert properly considered apportionment when the expert found that the applicant was unable to benefit from vocational rehabilitation or return to the labor market, based on the effects of the industrial injury. The vocational expert explained that 10% orthopedic apportionment was minimal in light of high WPIs, work restrictions, the applicant's chronic neck pain, and use of opioid medication. Similarly, the vocational expert addressed 25% psychiatric apportionment in relation to a GAF of 50, numerous severe work function impairments, overall marked permanent mental impairment, orthopedic and psychiatric WPI ratings, noticeable cervical dystonia, and tremors. The WCAB determined that the vocational expert had properly considered whether medical apportionment affected the expert's conclusion that the applicant was not amenable to vocational rehabilitation and how non-industrial medical apportionment affected the conclusions.

In Brazil v. San Mateo County Transit District (2020), a panel decision, the applicant sustained an

injury to her back, right knee, and psyche. The WCJ found the applicant to be 100% disabled, with no basis for apportionment. The opinions of the defense vocational expert were not considered substantial evidence since the expert had not addressed apportionment. The opinions of the applicant's vocational expert were considered substantial evidence. The applicant's vocational expert considered the 5% apportionment to the lumbar spine to be modest, concluding that the applicant was 100% disabled. The WCJ concluded that the applicant's 100% permanent disability would not be reduced by apportionment to non-industrial factors.

In Duarte v. Life Generations Healthcare, a panel decision, the applicant, a certified nursing assistant, sustained an injury on 9/24/14 to her neck, right upper extremity, and back. A QME in neurology reported that the applicant was unable to return to work as a certified nursing assistant and that she was restricted from repetitive flexion and extension maneuvers or rotation of the cervical spine. She was also precluded from repetitive bending at the waist or twisting. She needed to avoid pushing, pulling, or lifting more than 15 pounds. Regarding her right shoulder condition, she was unable to lift more than 5 pounds with the right upper extremity and was unable to reach above shoulder height with the right upper extremity repetitively. The applicant had a prior work-related incident on 10/31/10, where she sustained an injury to her cervical spine and right shoulder. The orthopedic AME for the prior injury found permanent work restrictions that included a preclusion from repetitive head and neck movements, repetitive work above shoulder level, and very heavy work.

The applicant's vocational expert reported that the applicant was not amenable to rehabilitation and was unable to sustain employment in the open labor market due to the 9/24/14 work injury alone. The vocational expert opined that there was no vocational apportionment since the vocational expert did not find any record of a labor-disabling limitation prior to the 9/24/14 injury. The WCJ determined that the vocational expert's report did not constitute substantial evidence, since the vocational expert did not comment on the pre-existing work restrictions that the vocational expert had reviewed in the QME's reports. The WCJ also found that the vocational expert's reports were based on an inaccurate history and speculation. As a result, the vocational expert's reports were insufficient to rebut the scheduled rating.

This concludes the review of recent significant court decisions involving vocational apportionment. Next, this article comments on the implications for practice by vocational experts from the review of the court decisions involving the admissibility of vocational opinions after SB 863, medical apportionment, and vocational apportionment.

Implications for Practice

The first implication for practice from the initial set of court decisions is understanding that the opinions of vocational experts may be admissible. The most significant court decisions in this regard are The Conco Companies v. WCAB (Sandoval, 2019), County of Alameda v. WCAB (Williams, 2020), and State Compensation Insurance Fund v. WCAB (Ortega, 2020). Necessary components of a vocational expert evaluation and report are described in California Code of Regulations section 10685 (Melchoir, 2021).

One requirement for a vocational expert report to be considered substantial evidence is that it it is based on an individualized analysis, as described in Contra Costa County v. WCAB and Doreen Dahl (2015). Another requirement for substantial evidence is that opinions of employability, earning capacity, and amenability to rehabilitation emanating from the vocational analysis should be based on medical and vocational factors due to the industrial injury—and not due to non-industrial factors. This concept was described in Ogilvie v. WCAB and City and County of San Francisco v. WCAB (2011), commonly referred to as Ogilvie

III, where the California Court of Appeal determined that:

While some of the briefing provided to the court may be read to suggest that under LeBoeuf a disability award may be affected when an employee is not amenable to vocational rehabilitation for any reason, the most widely accepted view of its holding, and that which appears to be most frequently applied by the WCAB, is to limit its application to cases where the employee's diminished future earnings are directly attributable to the employee's work related injury, and not due to nonindustrial factors such as general economic conditions, illiteracy, proficiency to speak English, or an employee's lack of education. (p.11)

A vocational rehabilitation evaluation, then, should involve a comparison of pre-injury and post-injury employability, earning capacity, and amenability to rehabilitation, while focusing on factors attributed to the work injury rather than non-industrial factors.

Another implication for practice from the review of the court decisions is that vocational experts need to consider and conduct a probative analysis of apportionment of both medical and vocational factors for their opinions to be considered substantial evidence. It is necessary for vocational experts to consider whether apportionment affects their conclusions regarding employability, earning capacity, and amenability to rehabilitation and how apportionment of non-industrial factors affected their conclusions. "The Vocational Apportionment Analysis Process" (Van de Bittner, 2015), as modified to include an additional step, can assist vocational experts in developing vocational apportionment opinions. The steps are as follows:

1. Review records regarding medical factors affecting apportionment.

2. Review records regarding vocational factors affecting apportionment.

3. Clarify the impact of medical and vocational factors affecting apportionment on employability.

4. Clarify the impact of medical and vocational factors affecting apportionment on earning capacity.

5. Clarify the impact of medical and vocational factors affecting apportionment on vocational feasibility and amenability to rehabilitation.

The medical and vocational facts pertaining to an applicant are unique to each case. Therefore, it is not possible to recommend a numeric formula for analyzing vocational apportionment that will apply to every case. However, in some cases, the applicant had a pre-existing injury to the same body part. If the medical records contain a medical opinion on work restrictions for the prior injury, the vocational expert can develop an opinion regarding the percentage of labor market access that the applicant was precluded from for the pre-existing work restriction. The percentage of diminished labor market access for the pre-existing injury represents the vocational apportionment attributed to the pre-existing injury.

Similarly, some applicants have pre-existing non-industrial vocational factors like those described in Ogilvie III (2011). Regarding illiteracy or proficiency to speak English, a vocational expert can use government data to clarify diminished labor market access or diminished earning capacity attributed to the impermissible vocational factor while using a high school diploma or a GED certificate as a threshold. The percentage of diminished labor market access or diminished earning capacity represents vocational apportionment attributed to the impermissible vocational factor.

Summary

A review of court decisions involving work injuries on or after January 1, 2013, revealed that the opinions of vocational experts are admissible if they are considered substantial evidence. Four recent court decisions were reviewed regarding

medical apportionment, and 19 court decisions were reviewed regarding vocational apportionment. The primary revelation of this review is that vocational experts need to conduct a probative analysis of vocational apportionment for their opinion to be considered substantial evidence.

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Determining the Replacement Value of Household Services Using the Dollar Value of a Day

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Abstract. *This paper outlines the use of The Dollar Value of a Day to determine the value of household services performed by individuals within the United States. The value of household services performed by an individual can be determined based on their functioning prior to injury or death and can, then, be compared to the household services being performed after the event being litigated.*

Household services are activities completed outside of the world of work and, typically, for the betterment of others. These services are not limited to the immediate family or those living within the household and may include cooking, cleaning, lawn care, home repairs, transporting others, caring for others, etc. They may vary based on the individual performing the task, i.e., gender/perceived gender, the time the individual may be spending outside of the home, the number of people living in the home, the number of children in the home, etc. Even if a person has the functional ability to maintain their employment into the future, there may be a significant loss in their ability to perform household services. There may be a reduction in the plaintiff's ability to perform household services following injury, and these services may be performed by others or may no longer be performed by anyone. The individual may no longer be cleaning, doing laundry, or cooking as frequently. They may have stopped performing repairs on their home. If a life care plan is not being completed, typically the only other source for obtaining information regarding household services is the vocational interview. In addition, the performance of household services is not linear, meaning that a person will not perform the same number of hours of household services throughout their lifetime. Generally, the number of hours performing household services will increase following the birth of children and then, gradually, decline until they turn 18 years of age. The number of hours performing household services may remain steady until the worker retires, at which time, there generally is a significant increase in the number of hours they are performing household services. Typically, this is a factor of time. When the person was working, they may have put off completing some household repairs, or performing maintenance to vehicles. This classification of household services: Pets, Home & Vehicles, etc., increases significantly upon retirement.

The ability to claim for a loss in ability to perform household services may vary by state and is recognized in other countries. However, not every jurisdiction allows for recovery of lost household services. In Utah,

for example, economic damages include the loss of household services. To recover damages for this loss, the plaintiff must prove the reasonable value of the household services that they are no longer able to perform.

The 2020 Florida statute states that motor vehicle insurance benefits must provide disability benefits equal to:

Sixty percent of any loss of gross income and loss of earning capacity per individual from inability to work proximately caused by the injury sustained by the injured person, plus all expenses reasonably incurred in obtaining from others ordinary and necessary services in lieu of those that, but for the injury, the injured person would have performed without income for the benefit of his or her household. (Emphasis added)

In Alabama, loss of household services is not specifically cited in the statue or case law, except for lost services which would have been provided by a minor child to their parents.[1] In California, the jury instructions are as follows: *To recover damages for the loss of ability to provide household services the plaintiff must prove the reasonable value of the services they would have been reasonably certain to provide to their household if the injury had not occurred.* The ability to claim a loss of household services was established in Canada in 1885.

In *Dwyer v. Southwest Airlines Co.,* 2019 U.S. LEXIS 77844 (M.D. TN 2019) the plaintiff moved to add a claim for her lost household services, which the Federal Judge denied as "futile" because Tennessee law does not allow a recovery by a plaintiff for the loss of their own household services. The Judge conducted a survey and concluded that of the 47 jurisdictions that were represented in the consolidated multi-district litigation including this case, 17 allowed recovery of the plaintiff's lost household services, while 30 jurisdictions did not. The Judge determined that a claim for lost household services could be pursued as part of the plaintiff's damages for pain and suffering.

It is not unusual to see a report which does not utilize specific data or information on which to render an opinion regarding lost household services. Expert opinions and testimony must be within the parameters set forth in Daubert & Frye in most states and federal jurisdictions. Recent court decisions have reinforced the need for a quantitative analysis in determining the loss of household services.

In the case of *Gibson v. United States,* 2020 U.S. Dist. LEXIS 8656; 2020 WL 241550 (D. MT 2020) the federal judge excluded the testimony of the economist regarding a loss of enjoyment of life (hedonic damages) but permitted her testimony regarding the decedent's loss of earnings and value of the decedent's lost household services. The Judge concluded that the testimony of the economist did not meet the "standards of reliability and relevance as required under FRE 702 (Federal Rules of Evidence 702) and Daubert."

In *Chaudry v. Fowlkes*, 243 Md. App. 75; 210 A.3d 107 (Md. App. 019) the defendants appealed a jury award of $500,000 for the lost household services of a decedent child. The deceased was an adult child (aged 22) who was living with her mother prior to death. The Maryland Court of Special Appeals agreed with the defense and reversed the award. The Court held that in order to claim a loss of household services in Maryland, the plaintiff must:

1) Identify domestic services that have a market value; (2) have reasonably expected the decedent to provide the identified services, which absent the decedent's legal obligation to provide the services, will typically require evidence showing that the decedent was regularly providing the services in the past; and (3) present some evidence concerning the

[1] *Gess v. U.S.,* 991 F.Supp. 1332, 1347, 1350, (M.D.Ala.1997); *Smith v. Richardson,* 277 Ala. 389, 394, 171 So.2d 96, 100 (1965).

> duration the decedent would have likely provided the services.

The court determined the plaintiff's evidence did not meet these standards and reversed the award for lost household services.

In *Finney v. Morton* 2019 NY App. Div. LEXIS 1776 (NY App. 2019), the NY Supreme Court wrote:

> *Here, although the plaintiff's expert economist valued the loss of the decedent's household services based on a statistical average of services performed in a two-person household, there was no evidence in the record as to the nature and frequency of any services actually performed by the decedent prior to his death. Rather, the record was silent on this issue. In addition, there was no evidence of actual expenditures incurred in replacing whatever household services the decedent may have performed in the past, or of any anticipated future expenditures with regard to such services. Accordingly, the plaintiff should not have been awarded damages for past and future loss of household services since, in the absence of any evidence establishing what services the decedent actually performed, those awards were speculative and were not warranted by the facts.*[2]

The primary source for quantifying the loss of household services is *The Dollar Value of a Day* (DVD) published by Expectancy Data. They have compiled data from the U.S. Department of Labor's Bureau of Labor Statistics' (BLS) *American Time Use Survey* (ATUS) to determine the amount of time individuals participate in various activities during a day. The value of these services is then calculated to have a replacement value using 2019 U.S. Department of Labor wage surveys (OES), with an adjustment for the legally required employment taxes or benefits paid by private industry employers of part-time employees. These wages can, then, be adjusted to a specific geographic region.

For the 2020 version of this publication, data was analyzed representing the time spent by 210,586 individuals, age 14 and above, over the course of one day, from 2003 to 2019. There are only 24 hours in a day and 168 hours in a week, so time spent performing one activity reduces the amount of time available for other activities. The survey questions focus on the primary activity being performed and does not focus on the secondary activity being performed. For example, a person may be watching television while eating and/or doing laundry. The primary activity would be one of these activities, but not all three. The data was then compiled into 385 tables based on gender, amount of time working, ages of children, marital status, etc.

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[2] Law.justia.com/cases/

The data in each table is separated into the following categories:

- Household Production
- Caring and Helping
- Personal Time
- Leisure
- Work and Education

Each category is broken down further to include the following:

- Household Production
  - Inside Housework
  - Food Cooking & Clean-up
  - Pets, Home & Vehicles
  - Household Management
  - Shopping
  - Obtaining Services
  - Travel for Household Activity
- Caring and Helping
  - Household Children
  - Household Adults
  - Non-household Members
  - Travel for Household Members
  - Travel for Non-Household Members
- Personal Time
  - Eating & Drinking
  - Personal Health Care
  - Grooming
  - Sleeping
  - Private, Personal or N/A
- Leisure
  - Socializing
  - Passive Leisure
  - Active Leisure
  - Attendance Leisure
  - Religious Activities
  - Volunteering
  - Travel Related to Leisure
- Work and Education
  - Working at Job
  - Educational Activities
  - Commuting to Work or School

The amount of time an individual spends in each area impacts the amount of time that they have available to spend in other areas. For example, if a person is an over-the-road truck driver who drives 70 hours per week, they will not have the same amount of time available for activities outside of work that the typical employee may have. Additional variables may include the number of children who are living in the home, the ages of the children, number of adults in the home, if there are dependent parents who are being cared for, etc.

In quantifying the loss of household services, typically the focus is the categories of Household Production, and Caring and Helping. Personal Time, Leisure, Work and Education, are not considered household services, but the amount of time spent in these categories effects the amount of time available in the other areas. In addition to determining the amount of pre-injury household services being performed, one needs to determine how long the plaintiff would have participated in the world of work, otherwise known as their pre-injury work life expectancy. The author encourages the use of the Skoog work life expectancy tables. There also needs to be determination as to how long the person would have performed household services, but for the event being litigated.

A hypothetical household may consist of a married couple, the husband (working full-time), the wife (working part-time), with two children, born March 1, 2011, and November 1, 2013. If we look at Table 15 of the DVD, it will show that the husband would be performing 13.62 hours of household services per week in the area of Household Production and 6.59 hours per week in the area of Caring & Helping, until the youngest child turns 13 years of age. Based on BLS wage data, each task is given an hourly value, which is then given a value of day or how much the replacement costs would be for performing a day of household services.

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours: Secondary Child Care	With Family	At Home	Alone	Participation Rate	Standard Error Percent
Inside Housework	1.81	$14.55	$3.77	1.08	1.00	1.76	0.80	20.6%	2.4%
Food Cooking & Clean up	2.64	14.47	5.46	1.77	1.60	2.55	1.01	48.0	1.3
Pets, Home & Vehicles	4.24	16.96	10.26	2.16	1.55	3.86	2.51	31.7	1.9
Household Management	0.80	21.01	2.41	0.37	0.37	0.61	0.40	18.9	3.2
Shopping	1.98	14.75	4.18	0.94	1.31	0.07	0.63	36.8	2.0
Obtaining Services	0.11	17.85	0.27	0.03	0.04	0.04	0.04	2.4	9.0
Travel for Household Activity	2.04	18.08	5.28	0.79	1.12	0.02	0.85	40.4	1.8
Household Production	**13.62**	**16.25**	**31.62**	**7.14**	**7.01**	**8.91**	**6.24**	**79.9**	**0.9**
Household Children	4.48	14.75	9.43	n/a	4.22	3.02	0.19	52.9	1.6
Household Adults	0.16	14.52	0.34	0.06	0.14	0.08	0.02	5.8	8.2
Non Household Members	0.46	14.74	0.96	0.12	0.32	0.07	0.03	7.0	7.7
Travel for Household Members	1.19	18.08	3.08	0.06	0.80	0.02	0.38	31.0	1.7
Travel for Non Household Members	0.29	18.08	0.76	0.07	0.15	0.01	0.10	6.4	4.4
Caring and Helping	**6.59**	**15.49**	**14.58**	**0.30**	**5.63**	**3.20**	**0.72**	**57.4**	**1.3**
Eating & Drinking	7.75	14.92	16.52	3.85	4.94	4.31	1.63	96.0	0.7
Personal Health Care	0.45	14.49	0.94	0.17	0.24	0.26	0.18	4.2	8.5
Grooming	3.92	14.66	8.22	1.26	n/a	n/a	n/a	81.6	0.8
Sleeping	56.63	15.19	122.92	n/a	n/a	n/a	n/a	99.9	0.5
Private, Personal, or N/A	1.70	17.01	4.13	0.60	0.54	0.64	0.58	21.9	2.9
Personal Time	**70.45**	**15.17**	**152.72**	**5.87**	**5.72**	**5.22**	**2.39**	**100.0**	**0.6**
Socializing	4.05	16.86	9.75	2.31	3.40	1.86	0.09	37.5	1.9
Passive Leisure	19.27	14.51	39.95	9.98	12.48	17.94	6.34	89.2	0.8
Active Leisure	2.42	14.51	5.02	0.83	1.03	0.41	0.81	19.0	2.5
Attendance Leisure	0.99	14.51	2.05	0.60	0.85	0.02	0.05	5.2	2.9
Religious Activities	0.85	19.98	2.42	0.53	0.65	0.13	0.12	7.8	3.1
Volunteering	1.31	19.98	3.73	0.67	0.77	0.14	0.14	9.1	3.3
Travel Related to Leisure	2.88	18.08	7.45	1.24	1.73	0.03	1.01	51.9	1.7
Leisure	**31.77**	**15.51**	**70.37**	**16.15**	**20.92**	**20.54**	**8.57**	**96.5**	**0.7**
Working at Job	41.70	50.38	300.12	1.74	0.92	3.63	6.79	72.2	0.8
Educational Activities	0.20	19.98	0.58	0.07	0.05	0.14	0.13	0.9	7.8
Commuting to Work or School	3.67	18.08	9.47	0.10	0.20	0.03	3.25	61.0	1.2
Work and Education	**45.57**	**47.64**	**310.17**	**1.92**	**1.17**	**3.80**	**10.17**	**73.1**	**0.9**
Total	**168.00**	**$24.14**	**$579.46**	**31.39**	**40.45**	**41.67**	**28.08**		

Avg. Size of U.S. Pop. in 2003 2019	6,062,964	Average Age	42.9	% of Mean Hours	Owners	Renters
ATUS Respondents in 2003 2019	6,423	5th Percentile Age	32.0	Household Production	102.4%	85.6%
Sunday Respondents	1,644	95th Percentile Age	55.0	Caring and Helping	102.1%	85.6%
Weekday Respondents	3,180	Household Size	4.09	Personal Time	99.9%	100.7%
Saturday Respondents	1,599	Number of Adults	2.13	Leisure	99.2%	105.4%
		Number of Children under Age 18	1.96	Work and Education	99.7%	101.5%
Household Production Weekly Hours for the Benefit of the Respondent			1.27	Population (1,000s)	5,177	850
Percentage of Total Household Production Weekly Hours Benefiting the Respondent			9.3%	Pop. Size Valid %'s Yes		Yes

Definitions Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.

Hourly Value: See tables 386 412.

Dollar Value of a Day	Weekly hours times hourly value divided by seven.
Secondary Child Care:	While performing a primary activity, at wake children under age 13 were in the respondent's care.
With Family:	At least one primary family member (spouse, child, or parent) was in the room or accompanied the respondent.
At Home:	The respondent was inside or outside his or her own home.
Participation Rate:	Percent of population reporting at least one daily episode of the activity.
Standard Error Percent:	Standard error of the mean reported as a percent of the episode mean in the activity.
% of Mean Hours:	Adjustment percentage to weekly hours based on whether living quarters are owned or rented.

Household production weekly hours Respondent related household production divided by the respondent's household size plus 1 plus an additional 1 if for the benefit of the respondent: benefiting the respondent is respondent benefit household production weekly hours divided by total weekly hours of household production. See Table 413 for description.

Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal and work activities. Percentage of mean hours valid for populations greater than 290,000.

Table 15. Married men employed full time, Spouse employed, All ages, youngest child ages 6 through 12;The Dollar Value of a Day, 2019

Let us look at the data provided on this table a little closer. The table represents 6,423 respondents. Their average age was 42.9 and the average number of people in the home was 4.09, 2.13 adults and 1.96 children. The average number of hours worked per week is 41.7 with the weekly hours commuting being 3.67 hours. Now, look at the lower right portion of the table. The data finds that the number of hours of Household Production of property owners is 102.4% of the mean and the number of hours of Household Production for those who rent is 85.6% of the mean. Similar statistics are true for house spent in Caring and Helping. Owners spend 102.1% of the mean performing these services compared to renters who spend 85.6% of the mean performing these services.

Avg. Size of U.S. Pop. in 2003 2019	6,062,964	Average Age	42.9	% of Mean Hours	Owners	Renters
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		Number of Children under Age 18	1.96	Work and Education	99.7%	101.5%
Household Production Weekly Hours for the Benefit of the Respondent			1.27	Population (1,000s)	5,177	850
Percentage of Total Household Production Weekly Hours Benefiting the Respondent			9.3%	Pop. Size Valid %'s	Yes	Yes

This means that there are three adjustments to the data which need to be made. Depending on whether our hypothetical family is renting or owning their home, the number of hours the married man is performing Household Production—and Caring and Helping—will need to be adjusted accordingly. The third adjustment is made based on the geographic location where they are living.

The DVD is based on wage replacement costs in performing household services and wages vary across the United States. Wages are adjusted to the plaintiff's geographic area based on Table 414. The table shows that wages in California are 11.4% higher than the mean, and that the wages in San Diego, CA, are 10.2% higher than the mean.

In this scenario, the married man owns his home and lives in San Diego, CA. He would have been doing 13.62 hours per week of household production which needs to be adjusted by 102.4%, as they own their home, so he would have been performing 13.95 hours of household production per week. The mean hourly value of these services is $16.25 per hour, which needs to be increased by 10.2% to reflect the wages being paid in San Diego, CA, resulting in a replacement cost of

$17.91 per hour. The value of Household Production being performed would be 13.95 hours per week x $17.91 per hour x 52 weeks per year = $12,992. This is the annual amount of household services being performed in Household Production by the married man until his youngest child turns 13.

The same calculations would, then, need to be done for Caring and Helping. Continuing with Table 15, the man would be performing services of 6.59 per week in this category. As outlined above, since he owns his home, this number needs to be adjusted by 102.1%, resulting in the performance of 6.73 hours of household services per week in the area of Caring and Helping. The mean hourly replacement cost for these services equals $15.49 which, adjusted to the San Diego, CA, labor market, equals $17.07 per hour. The value of Caring and Helping performed would be 6.73 hours per week x $17.07 per hour x 52 weeks per year = $5,974. This is the annual amount of household services performed in the Caring and Helping category by the married man until his youngest child turns 13. Therefore, the total annual amount of household services (Household Production and Caring and Helping) from the date of injury until his youngest child turns 13 equals $18,966.

It is necessary for the vocational rehabilitation counselor to ask specific questions regarding the make-up of the home pre- and post-injury, living conditions, etc. It is not unusual for a family structure to change following an injury, but the baseline for determining the loss of household services is the amount of household services the plaintiff was performing prior to their injury. Post-injury, the family may move in with other family members out of economic necessity or they may no longer have the physical ability to maintain their prior home. A severely injured single mother may no longer be able to care for her children and they may now be cared for by others. These are all factors to consider when determining the post-injury household services being performed.

Questions to consider include:

- What type of residence was the plaintiff living in?
- Were they renting or did they own their home?
- Who did they live with?
- Did the other adults in the household work prior to the plaintiff's injury?
- Were they working full-time or part-time?
- Are the other adults in the household continuing to work the same number of hours?
- Are there children in the household?
- Are the children living in the home full-time?
- What were the ages of the children when the plaintiff was injured?
- Were there adults in the household the plaintiff was caring for?
- What household services was the plaintiff performing before the injury?
    - Cooking
    - Cleaning
    - Laundry
    - Grocery Shopping
    - Care for pets
    - Automobile maintenance
    - Home repairs
    - Home remodeling
    - Bill paying
    - Lawn Care
    - Care for children
    - Transportation for children
    - Care for others outside of the home

This is not an all-encompassing list and the answers to these questions may elicit additional questions to help objectively determine the household services performed by the plaintiff, both pre- and post-injury. It is common for parents to live with their children due to the care they need as they age. If this situation exists, it will be necessary to determine the care being provided to the parents, the date of birth, and life expectancy of the parents.

What household services is the plaintiff performing following the injury? Have they hired out for household services to be performed that they would have completed absent their injury? What household services are being performed by others? How much less do they feel they are doing in household services following the

injury, compared to prior to the injury? Once this information is obtained, the vocational rehabilitation counselor may adjust they feel necessary to the tables, so they reflect the person they are evaluating. In the example above, the average number of hours spent working at a job (Table 15) is 41.7, with commuting time of 3.67 hours per week. A truck driver may be driving 10 hours per day and commuting an hour per day to obtain his truck. These factors will need to be considered in determining if there is a loss of household services, as the truck driver may be performing more hours of household services post-injury than they were pre-injury. The vocational rehabilitation counselor may want to use a table which includes children in the home to reflect the amount of time spent caring for elderly parents and utilize that data to adjust to the life expectancy of the elderly parent.

California	111.4
Bakersfield, CA	102.3
Chico, CA	102.1
El Centro, CA	101.8
Fresno, CA	105.0
Hanford Corcoran, CA	105.4
Los Angeles Long Beach Anaheim, CA	109.6
Madera, CA	103.7
Merced, CA	106.6
Modesto, CA	104.7
Napa, CA	116.2
Oxnard Thousand Oaks Ventura, CA	109.9
Redding, CA	105.3
Riverside San Bernardino Ontario, CA	106.6
Sacramento Roseville Arden Arcade, CA	109.3
Salinas, CA	113.0
San Diego Carlsbad, CA	110.2
San Francisco Oakland Hayward, CA	124.2
San Jose Sunnyvale Santa Clara, CA	125.2
San Luis Obispo Paso Robles Arroyo Grande, CA	109.4
Santa Cruz Watsonville, CA	111.2
Santa Maria Santa Barbara, CA	111.5
Santa Rosa, CA	116.7
Stockton Lodi, CA	109.8
Vallejo Fairfield, CA	111.6
Visalia Porterville, CA	103.8
Yuba City, CA	105.3
Eastern Sierra Mother Lode nonmetro area	105.5
North Coast nonmetropolitan area	103.9
North Valley nonmetropolitan area	107.9

Let's keep working in our scenario. The first table covered the time until the youngest child turned 13. Table 16 covers the time from when the youngest child is 13 years of age until they turn 18.

As we can see during this period, the man would have been doing 14.45 hours per week of household production which needs to be adjusted by 102.1% as they own their home (the percentage of mean hours spent performing household services when comparing renters to owners varies with each table, so be sure to check). Thus, he would have been performing 14.75 hours of household production per week. The mean hourly value of these services is $16.43 per hour, which needs to be increased by 10.2% to reflect the wages being paid in San Diego, CA, resulting in a replacement cost of $18.10 per hour. The value of Household Production being performed would be 14.75 hours per week x $18.10 per hour x 52 weeks per year = $13,883. This is the annual amount of household services being performed in Household Production by the married man until his youngest child turns 18.

The same calculations would then need to be made for Caring and Helping. Continuing with Table 16, the man would be performing services of 3.76 hours per week in this category. As outlined above, since he owns his home, this number needs to be adjusted by 97.3%, resulting in the performance of 3.66 hours of household services per week in Caring and Helping. The mean

hourly replacement cost for these services equals $16.02 which, adjusted to the San Diego, CA, labor market, equals $17.65 per hour. The value of Caring and Helping to be performed would be 3.66 hours per week x $17.65 per hour x 52 weeks per year = $3,359. This is the annual amount of household services being performed in the Caring and Helping category by the married man until his youngest child turns 18. Therefore, the total annual amount of household services (Household Production and Caring and Helping) from the date of the youngest child turns 13 until they turn 18 equals $17,242.

A calculation needs to be made regarding work life expectancy. In this scenario, the man was born on December 1, 1980, is a college graduate and has a date of injury of July 1, 2020. At the date of injury, he was 39.61 years of age and had a work life expectancy of 24.71 years.[3]

The results of the DVD and use of these tables reflects, to some degree, the "healthy life function" or Full Function Life Expectancy, i.e., the probability of a person being healthy enough in their later years to produce the household services they did when younger. A person's ability to perform household services decreases in later years due to their physical ability, as well as a result of their desires. The latest data from the World Health Organization (WHO) shows that the average healthy life expectancy for males is 75.6, while females are expected to live to 77.1.[4] At the time of this event, the plaintiff was 39.61 years of age with a statistical life expectancy to age 81.6.[5] His "healthy life function" would be to age 75.6, at which time the loss of household services would end.

Let's revisit our scenario and calculate the loss of household services from the date the youngest child turned 18 to the end of the plaintiff's statistical work life expectancy. Table 17 provides the data for married men, employed full-time, spouse employed, all ages, no minor children in the home.

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours				Particip-ation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home	Alone		
Inside Housework	1.68	$14.55	$3.50	0.00	0.72	1.64	0.96	18.2%	3.6%
Food Cooking & Cleanup	2.30	14.47	4.76	0.00	1.26	2.26	1.01	43.9	2.1
Pets, Home & Vehicles	5.17	16.96	12.53	0.00	1.55	4.68	3.52	37.3	2.5
Household Management	1.02	21.01	3.06	0.00	0.45	0.73	0.52	20.6	4.8
Shopping	2.02	14.75	4.25	0.00	1.17	0.09	0.81	37.3	3.0
Obtaining Services	0.15	17.85	0.38	0.00	0.03	0.08	0.10	1.9	20.8
Travel for Household Activity	2.11	18.08	5.44	0.01	1.06	0.02	0.98	41.2	2.3
Household Production		**14.45**	**16.43**	**33.91**	**0.03**	**6.24**	**9.50**	**7.88**	**78.5 1.4**
Household Children	1.54	14.75	3.24	n/a	1.38	0.78	0.09	27.7	4.3
Household Adults	0.21	14.52	0.44	0.00	0.18	0.06	0.03	6.5	14.4
Non Household Members	0.55	14.74	1.16	0.01	0.40	0.09	0.07	7.5	9.4
Travel for Household Members	0.99	18.08	2.55	0.00	0.63	0.01	0.35	20.5	3.1
Travel for Non Household Members		0.47	18.08	1.22	0.00	0.31	0.00	0.10	6.710.7
Caring and Helping	**3.76**	**16.02**	**8.62**	**0.01**	**2.91**	**0.94**	**0.64**	**35.8**	**2.9**
Eating & Drinking	7.83	14.92	16.70	0.02	4.68	4.48	2.04	96.4	0.9

[3] The Markov Process Model of Labor Force Activity 2012-2017: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors, *Journal of Forensic Economics* 28(1-2), 2019, pp.5-108, Skoog, Ciecka and Krueger, for men who are initially active in the world of work, with college degree.

[4] https://apps.who.int/gho/data/node.main.HALE?lang=en December 4, 2020

[5] Social Security Administration Life Expectancy Tables

Personal Health Care	0.44	14.49	0.92	0.00	0.19	0.24	0.19	4.7	11.2
Grooming	4.17	14.66	8.73	0.00	n/a	n/a	n/a	82.2	1.2
Sleeping	56.00	15.19	121.55	n/a	n/a	n/a	n/a	99.9	0.7
Private, Personal, or N/A	1.57	17.01	3.82	0.00	0.46	0.41	0.58	20.7	4.5
Personal Time	**70.02**	**15.17**	**151.72**	**0.03**	**5.33**	**5.13**	**2.81**	**100.0**	**0.9**
Socializing	4.23	16.86	10.19	0.01	3.47	2.17	0.12	37.8	2.6
Passive Leisure	21.54	14.51	44.65	0.03	12.55	20.08	8.44	90.5	1.1
Active Leisure	2.28	14.51	4.72	0.01	0.81	0.41	0.90	18.4	3.7
Attendance Leisure	0.88	14.51	1.81	0.01	0.72	0.01	0.05	4.5	4.0
Religious Activities	0.74	19.98	2.12	0.00	0.57	0.09	0.12	7.0	4.2
Volunteering	1.03	19.98	2.94	0.00	0.45	0.20	0.21	6.8	5.7
Travel Related to Leisure	3.23	18.08	8.33	0.01	1.85	0.04	1.21	50.3	2.4
Leisure	**33.92**	**15.43**	**74.77**	**0.06**	**20.42**	**23.01**	**11.04**	**96.9**	**0.9**
Working at Job	42.01	56.29	337.80	0.00	0.93	4.09	7.86	72.7	1.1
Educational Activities	0.16	19.98	0.47	0.00	0.01	0.06	0.10	0.6	13.8
Commuting to Work or School	3.68	18.08	9.51	0.00	0.17	0.03	3.28	60.7	1.6
Work and Education		**45.85**	**53.09**	**347.77**	**0.00**	**1.11**	**4.18**	**11.25**	**73.7 1.2**
Total	**168.00**	**$25.70**	**$616.79**	**0.12**	**36.00**	**42.76**	**33.62**		

Avg. Size of U.S. Pop. in 2003 2019	3,641,984	Average Age	48.0	% of Mean Hours	Owners	Renters
ATUS Respondents in 2003 2019	3,102	5th Percentile Age	37.0	Household Production	102.1%	79.9%
Sunday Respondents	781	95th Percentile Age	59.0	Caring and Helping	97.3%	122.4%
Weekday Respondents	1,572	Household Size	3.70	Personal Time	99.9%	101.6%
Saturday Respondents	749	Number of Adults	2.42	Leisure	98.0%	116.2%
		Number of Children under Age 18	1.29	Work and Education	101.2%	90.1%
Household Production Weekly Hours for the Benefit of the Respondent			1.41	Population (1,000s)		3,254 371
Percentage of Total Household Production Weekly Hours Benefiting the Respondent			9.7%	Pop. Size Valid %'s Yes		Yes

Definitions

Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.

Hourly Value: See tables 386 412.

Dollar Value of a Day: Weekly hours times hourly value divided by seven.

Secondary Child Care: While performing a primary activity, at wake children under age 13 were in the respondent's care.

With Family: At least one primary family member (spouse, child, or parent) was in the room or accompanied the respondent.

At Home: The respondent was inside or outside his or her own home.

Participation Rate: Percent of population reporting at least one daily episode of the activity.

Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.

% of Mean Hours: Adjustment percentage to weekly hours based on whether living quarters are owned or rented.

Household production weekly hours Respondent related household production divided by the respondent's household size plus 1 plus an additional 1 if for the benefit of the respondent: the respondent's household size is greater than 1. The percentage of the total household production weekly hours benefiting the respondent is respondent benefit household production weekly hours divided by total weekly hours of household production. See Table 413 for description.

Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal and work activities. Percentage of mean hours valid for populations greater than 290,000.

Table 16. Married men employed full-time, spouse employed, all ages, youngest child ages 13 through 17

During this period, the man would have been doing 14.22 hours per week of household production, which needs to be 103.9%, as they own their home, resulting in the performance of 14.77 hours of household production per week. The mean hourly value of these services is $16.48 per hour, which needs to be increased by 10.2% to reflect the wages being paid in San Diego, CA, resulting in a replacement cost of $18.16 per hour. The value of Household Production being performed would be 14.77 hours per week x $18.16 per hour x 52 weeks per year = $13,948. This is the annual amount of household services being performed in Household Production by the married man until the end of his statistical work life expectancy.

The same calculations would then need to be done for Caring and Helping. Continuing with Table 17, the man would be performing services of 1.61 hours per week in this category. Since he owns his home, this number needs to be adjusted by 98.9%, resulting in the performance of 1.59 hours of household services per week in the area of Caring and Helping. The mean hourly replacement cost for these services equals $15.82 which, adjusted for the San Diego, CA, labor market, equals $17.43 per hour. The value of Caring and Helping to be performed would be 1.59 hours per week x $17.43 per hour x 52 weeks per year = $1,441. This is the annual amount of household services being performed in the Caring and Helping category by the married man from the time his youngest child turns 18 to the end of his statistical work life expectancy. Therefore, the total annual amount of household services (Household Production and Caring and Helping)—from the date the youngest child turns 18 until the end of the plaintiff's pre-injury work life expectancy—equals $15,389.

The final pre-injury calculation for household services in this example is during the man's retirement years. In this example, we are going to use Table 92, married men, retired, regardless of spousal employment, all ages, with no minor children in the home. As with any statistical database, there are a variety of options. One could choose to calculate the work life expectancy of the spouse and then, add tables to reflect when she was no longer working and they both were retired. This could also be taken a step further with calculations being made based on the specific age of the man during retirement. Regardless, you will see a significant jump in the number of hours performing household services once a person is retired, especially among homeowners.

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours				Participation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home	Alone		
Inside Housework	1.87	$14.55	$3.88	0.00	0.81	1.79	1.04	22.0%	2.5%
Food Cooking & Clean up	2.85	14.47	5.88	0.00	1.49	2.77	1.34	43.9	1.4
Pets, Home & Vehicles	9.48	16.96	22.95	0.00	1.90	8.79	7.37	49.9	1.2
Household Management	1.86	21.01	5.59	0.00	0.64	1.57	1.18	29.5	2.6
Shopping	2.72	14.75	5.74	0.00	1.62	0.09	1.03	39.5	1.6
Obtaining Services	0.37	17.85	0.96	0.00	0.12	0.24	0.13	5.0	7.1
Travel for Household Activity	2.36	18.08	6.09	0.00	1.25	0.02	1.04	45.2	1.6
Household Production		**21.50**	**16.63**	**51.08**	**0.00**	**7.83**	**15.27**	**13.13**	**85.1 0.8**
Household Children	0.00	14.75	0.00	n/a	0.00	0.00	0.00	0.0	0.0
Household Adults	0.57	14.52	1.19	0.00	0.49	0.33	0.08	8.8	5.4
Non Household Members	1.64	14.74	3.44	0.00	1.28	0.67	0.15	12.8	3.5
Travel for Household Members	0.18	18.08	0.48	0.00	0.14	0.00	0.05	4.2	3.9
Travel for Non Household Members		0.45	18.08	1.16	0.00	0.26	0.00	0.15	9.5 2.3
Caring and Helping	**2.84**	**15.44**	**6.27**	**0.00**	**2.18**	**1.00**	**0.42**	**20.4**	**2.4**
Eating & Drinking	10.10	14.92	21.52	0.00	7.86	7.86	1.82	98.0	0.5
Personal Health Care	1.57	14.49	3.25	0.00	0.65	0.86	0.77	17.2	4.1

Grooming	3.33	14.66	6.97	0.00	n/a	n/a	n/a	65.3	0.9
Sleeping	62.61	15.19	135.91	n/a	n/a	n/a	n/a	99.9	0.4
Private, Personal, or N/A	2.58	17.01	6.26	0.00	0.72	0.88	0.80	27.4	2.1
Personal Time	**80.18**	**15.18**	**173.91**	**0.00**	**9.23**	**9.59**	**3.38**	**100.0**	**0.5**
Socializing	5.30	16.86	12.77	0.00	4.28	2.53	0.20	40.5	1.5
Passive Leisure	46.48	14.51	96.37	0.00	26.28	45.21	19.83	98.1	0.5
Active Leisure	3.08	14.51	6.38	0.00	0.82	0.65	1.38	24.2	2.1
Attendance Leisure	0.73	14.51	1.52	0.00	0.58	0.04	0.06	4.1	3.1
Religious Activities	1.26	19.98	3.61	0.00	0.84	0.29	0.28	11.0	2.1
Volunteering	1.77	19.98	5.06	0.00	0.41	0.58	0.73	9.4	2.4
Travel Related to Leisure	3.22	18.08	8.32	0.00	2.03	0.04	1.03	51.6	1.4
Leisure	**61.85**	**15.17**	**134.03**	**0.00**	**35.25**	**49.34**	**23.52**	**99.6**	**0.5**
Working at Job	1.46	83.22	17.33	0.00	0.09	0.42	0.45	4.1	3.6
Educational Activities	0.03	19.98	0.08	0.00	0.00	0.02	0.03	0.1	26.5
Commuting to Work or School	0.13	18.08	0.34	0.00	0.01	0.00	0.11	2.9	4.8
Work and Education		**1.62**	**76.84**	**17.75**	**0.00**	**0.11**	**0.44**	**0.59**	**4.9 3.8**
Total	**168.00**	**$15.96**	**$383.05**	**0.00**	**54.58**	**75.64**	**41.04**		

Avg. Size of U.S. Pop. in 2003 2019	11,421,300	Average Age	70.9	% of Mean Hours	Owners	Renters
ATUS Respondents in 2003 2019	7,793	5th Percentile Age	59.0	Household Production	102.3%	62.5%
Sunday Respondents	2,003	95th Percentile Age	80.0	Caring and Helping	101.3%	78.6%
Weekday Respondents	4,023	Household Size	2.11	Personal Time	99.9%	102.2%
Saturday Respondents	1,767	Number of Adults	2.11	Leisure	99.4%	109.1%
		Number of Children under Age 18	0.00	Work and Education	95.8%	177.3%
Household Production Weekly Hours for the Benefit of the Respondent			2.32	Population (1,000s)	10,742	608
Percentage of Total Household Production Weekly Hours Benefiting the Respondent			10.8%	Pop. Size Valid %'s Yes		Yes

Definitions Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.

Hourly Value: See tables 386 412.

Dollar Value of a Day: Weekly hours times hourly value divided by seven.

Secondary Child Care: While performing a primary activity, at wake children under age 13 were in the respondent's care.

With Family: At least one primary family member (spouse, child, or parent) was in the room or accompanied the respondent.

At Home: The respondent was inside or outside his or her own home.

Participation Rate: Percent of population reporting at least one daily episode of the activity.

Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.

% of Mean Hours: Adjustment percentage to weekly hours based on whether living quarters are owned or rented.

Household production weekly hours Respondent related household production divided by the respondent's household size plus 1 plus an additional 1 if for the benefit of the respondent: the respondent's household size is greater than 1. The percentage of the total household production weekly hours benefiting the respondent is respondent benefit household production weekly hours divided by total weekly hours of household production. See Table 413 for description.

Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal and work activities. Percentage of mean hours valid for populations greater than 290,000.

Table 92. Married men, retired, regardless of spousal employment, All ages, no minor children in home

In retirement, the man would be performing 21.5 hours per week of household production, which needs to be adjusted by 102.3%, as they own their home, resulting in the performance of 21.99 hours of household production per week. The mean hourly value of these services is $16.63 per hour, which needs to be increased by 10.2% to reflect the wages being paid in San Diego, CA, resulting in a replacement cost of $18.33 per hour. The value of Household Production being performed would be 21.99 hours per week x $18.33 per hour x 52 weeks per year = $20,960. This is the annual amount of household services being performed in Household Production by the married man during his retirement years.

Continuing with Table 92, the man would be performing Caring and Helping services of 2.84 hours per week which is adjusted by 101.3% since he owns his home, resulting in the performance of 2.88 hours per week in this area. The mean hourly replacement cost for these services equals $16.63 which, adjusted to the San Diego, CA, labor market equals $18.33 per hour. The value of Caring and Helping to be performed would be 2.88 hours per week x $18.33 per hour x 52 weeks per year = $2,745. This is the annual amount of household services being performed in the Caring and Helping category by the married man during his retirement years. Therefore, the total annual amount of household services (Household Production and Caring and Helping) during his retirement equals $23,705.

Let's put together the calculations for the man's pre-injury household services. He was born on December 1, 1980, and he has a date of injury of July 1, 2020. His youngest child was born on November 1, 2013. The man was 39.61 years of age on the date of injury, with a life expectancy of 81.6 and "healthy life function" to age 75.6.

Our first calculation was the value of annual household services the man was performing from the date of injury until his youngest child turned 13. At the date of injury, the youngest child was 6.67 years of age, so the calculation would be:

(13-6.67) x $18,966 = $120,055

The next calculation is from when the youngest child turns 13 years of age until they turn 18 years of age, so this calculation would be:

5 x $17,242 = $86,210

The third calculation is from when the child turns 18 to the end of the man's work life expectancy, so this calculation would be:

24.71 (work life expectancy at date of injury) minus 11.33 (years from date of injury to when youngest child turned 18) x $15,389 = $205,905

The final pre-injury calculation in this example is from the end of the plaintiff's work life expectancy to the end of his "healthy life function." This calculation would be as follows:

75.6 (age at end of Health Life function) minus 39.61 (age at date of injury) minus 24.71 (work life expectancy) x $23,705 = $267,392

The total value of the man's pre-injury household services from the date of injury to the end of his "healthy life function" equals $679,562.

The questions asked of the plaintiff regarding his pre-injury household services should also be asked of his post-injury household services, and these questions may also be posed to their spouse or significant other. It is not unusual to have severely injured individuals downplay their limitations in performing household services, nor is it unusual for individuals with minimal functional limitations to embellish their inability to perform household services. The vocational rehabilitation counselor will need to analyze the functional limitations and determine specifically what household services the plaintiff is unable to perform. The ability to perform a task which now needs to be spread over days—or takes longer—represents a loss. For example, a person prior to their injuries may have mowed the lawn in an hour, however, post injury this task is spread out over three days. A task does not need to be hired out to represent a loss as a task being

performed by others, for no pay, represents a loss of their time.

Upon questioning the plaintiff, the vocational rehabilitation counselor may obtain a percentage of how much less in household services the plaintiff is performing post-injury compared to what they had been doing pre-injury and make that mathematical calculation. In the alternative, they may want to go through each category to determine tasks that the plaintiff is no longer doing—or is taking a significant amount of time in completing—and replicate the pre-injury calculations for the loss of household services.

The DVD is compiled of surveys completed by hundreds-of-thousands of people, and it is important for the vocational rehabilitation counselor to understand that the vocational rehabilitation counselor's sample size is 1, the person on which they are calculating losses. Due to the number of people surveyed there are some statistical anomalies most notable in the tables representing those who are disabled and unable to work.

Time Use Category	Weekly Hours	Hourly Value	Dollar Value of a Day	Weekly Waking Hours				Participation Rate	Standard Error Percent
				Secondary Child Care	With Family	At Home	Alone		
Inside Housework	2.80	$14.55	$5.82	1.20	1.42	2.78	1.37	27.3%	6.1%
Food Cooking & Cleanup	3.59	14.47	7.42	1.93	1.88	3.46	1.64	47.8	3.8
Pets, Home & Vehicles	3.73	16.96	9.04	1.19	1.05	3.39	2.50	29.5	6.6
Household Management	1.22	21.01	3.67	0.31	0.70	0.81	0.49	17.4	14.3
Shopping	2.16	14.75	4.54	0.66	1.52	0.05	0.55	29.0	6.1
Obtaining Services	0.16	17.85	0.42	0.03	0.03	0.08	0.08	2.2	27.1
Travel for Household Activity	1.48	18.08	3.82	0.43	0.88	0.01	0.53	32.8	4.2
Household Production		**15.15**	**16.05**	**34.74**	**5.76**	**7.49**	**10.58**	**7.18**	**76.6 2.8**
Household Children	6.12	14.75	12.89	n/a	5.76	4.96	0.24	47.6	4.4
Household Adults	0.54	14.52	1.12	0.10	0.47	0.20	0.07	11.5	18.2
Non Household Members	0.80	14.74	1.69	0.10	0.45	0.27	0.12	7.2	18.6
Travel for Household Members	1.47	18.08	3.79	0.18	1.01	0.02	0.42	28.5	4.4
Travel for Non Household Members	9.0	0.23	18.08	0.59	0.03	0.10	0.00	0.10	6.2
Caring and Helping	**9.16**	**15.35**	**20.08**	**0.41**	**7.79**	**5.45**	**0.96**	**55.2**	**3.8**
Eating & Drinking	7.09	14.92	15.11	2.98	5.36	6.03	1.51	94.4	2.1
Personal Health Care	3.84	14.49	7.95	0.96	1.89	3.08	1.86	27.9	8.8
Grooming	3.05	14.66	6.38	0.81	n/a	n/a	n/a	61.6	2.7
Sleeping	66.29	15.19	143.88	n/a	n/a	n/a	n/a	99.4	1.3
Private, Personal, or N/A	2.37	17.01	5.76	0.67	0.80	0.99	0.81	24.7	9.8
Personal Time	**82.63**	**15.17**	**179.08**	**5.42**	**8.05**	**10.10**	**4.17**	**100.0**	**1.7**
Socializing	7.22	16.86	17.38	2.67	5.99	3.48	0.20	42.2	5.1
Passive Leisure	45.09	14.51	93.49	15.80	26.21	43.88	18.54	95.9	1.9
Active Leisure	1.42	14.51	2.94	0.46	0.72	0.34	0.52	14.0	8.9
Attendance Leisure	0.53	14.51	1.10	0.11	0.32	0.11	0.17	3.2	12.2
Religious Activities	0.99	19.98	2.83	0.44	0.66	0.35	0.27	8.7	9.6
Volunteering	0.40	19.98	1.14	0.21	0.22	0.09	0.04	2.7	12.6
Travel Related to Leisure	2.11	18.08	5.45	0.64	1.46	0.03	0.56	34.9	5.3
Leisure	**57.76**	**15.07**	**124.34**	**20.33**	**35.60**	**48.30**	**20.31**	**97.9**	**1.8**
Working at Job	2.69	55.89	21.47	0.14	0.30	0.21	0.70	5.4	8.4
Educational Activities	0.28	19.98	0.79	0.04	0.00	0.19	0.27	0.9	19.6
Commuting to Work or School	0.34	18.08	0.88	0.00	0.02	0.00	0.31	5.6	8.0

Work and Education	**3.31**	**48.98**	**23.14**	**0.18**	**0.33**	**0.40**	**1.28**	**6.6 8.4**
Total 168.00	**$15.89**	**$381.37**	**32.11**	**59.26**	**74.83**	**33.90**		

Avg. Size of U.S. Pop. in 2003 2019	889,788	Average Age	47.6	% of Mean Hours	Owners	Renters
ATUS Respondents in 2003 2019	739	5th Percentile Age	29.0	Household Production	101.0%	98.5%
Sunday Respondents	186	95th Percentile Age	65.0	Caring and Helping	93.3%	108.1%
Weekday Respondents	368	Household Size	4.09	Personal Time	100.5%	99.5%
Saturday Respondents	185	Number of Adults	2.27	Leisure	99.8%	101.0%
		Number of Children under Age 18	1.82	Work and Education	104.3%	78.3%
Household Production Weekly Hours for the Benefit of the Respondent			1.41	Population (1,000s)	544	332
Percentage of Total Household Production Weekly Hours Benefiting the Respondent			9.3%	Pop. Size Valid %'s	Yes	Yes

Definitions Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.

Hourly Value: See tables 386 412.

Dollar Value of a Day Weekly hours times hourly value divided by seven.

Secondary Child Care: While performing a primary activity, at wake children under age 13 were in the respondent's care.

With Family: At least one primary family member (spouse, child, or parent) was in the room or accompanied the respondent.

At Home: The respondent was inside or outside his or her own home.

Participation Rate: Percent of population reporting at least one daily episode of the activity.

Standard Error Percent: Standard error of the mean reported as a percent of the episode mean in the activity.

% of Mean Hours: Adjustment percentage to weekly hours based on whether living quarters are owned or rented.

Household production weekly hours Respondent related household production divided by the respondent's household size plus 1 plus an additional 1 if for the benefit of the respondent: the respondent's household size is greater than 1. The percentage of the total household production weekly hours benefiting the respondent is respondent benefit household production weekly hours divided by total weekly hours of household production. See Table 413 for description.

Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal and work activities. Percentage of mean hours valid for populations greater than 290,000.

Table 71. Married men, disabled and unable to work, regardless of spousal employment, all ages, minor children in home

The chart shows that the respondents are working 2.69 hours per week, while commuting .34 hours per week, despite respondent categorization as "disabled and unable to work." Similar statistics appear on other tables for individuals who are disabled and unable to work. Most show minimal number of hours working at a job but represent individuals who may be classified as "disabled and unable to work" but are in fact working. Therefore, the vocational rehabilitation counselor may need to rely on their own professional clinical judgement to adjust the table they are using to represent the plaintiff they are evaluating and, in addition, may need to be prepared to explain why the adjustments were made. Keep in mind, our sample size or N is 1, the individual we are evaluating.

Obviously, in traumatic injuries and death the loss of ability to perform household services is 100%. There are some economists and others who render the opinion in wrongful death cases that the decedent plaintiff would have consumed 50% of the household services they were directly providing and 50% of the household services that the surviving spouse was providing. They do not provide for any quantitative foundation for this opinion, which on its face appears to reflect the opinion that the spouse has benefited because their husband or wife was killed. The author of this article has reviewed reports submitted by economists and others, with this level of consumption by the decedent, but is unable to find any articles or studies which support this opinion. In addition, the author was unable to find any case law

which supports a reduction for consumption in wrongful death cases.

Since we are using a hypothetical case in San Diego, CA, let us look at the jury instructions in that state in wrongful death cases, CACI 3921.[6]

The damages claimed by the plaintiff fall into two categories, economic damages, and noneconomic damages. You will be asked to state the two categories of damages separately on the verdict form. The plaintiff claims the following economic damages:

1. *The financial support, if any that the decedent would have contributed to the family during either the life expectancy that the decedent had before their death or the life expectancy of the plaintiff, whichever is shorter.*
2. *The loss of gifts or benefits that the plaintiff would have expected to receive from the decedent.*
3. *Funeral and burial expenses; and*
4. *The reasonable value of household services that the decedent would have provided.*

Your award of any future economic damages must be reduced to present cash value.

There is no mention of a reduction for the consumption of household services by the decedent. Another way to look at this is to ask what percentage of household services performed would have been directly consumed by the person performing them. In the case of a single person living alone, there may be no or minimal household services that would have been for the betterment of someone else. However, in the case of a couple, both people benefit 100% from the household services performed by the other. Household services must be performed 100% for them to be completed. One does not mow half of the lawn, nor do they stop the laundry halfway through and say it is complete, nor can they drive halfway to the grocery store and be able to shop for groceries. Each task must be completed for it to be considered done.

If a legal decision has been made that the loss of household services needs to include a deduction for the services completed by the decedent for their own benefit, then the DVD may be a source of this data. If we return to Table 15, we see statistics which show the percentage of total household production weekly hours benefiting the respondent.

The chart shows that the respondents are working 2.69 hours per week, while commuting .34 hours per week, despite respondent categorization as "disabled and unable to work." Similar statistics appear on other tables for individuals who are disabled and unable to work. Most show minimal number of hours working at a job but represent individuals who may be classified as "disabled and unable to work" but are in fact working. Therefore, the vocational rehabilitation counselor may need to rely on their own professional clinical judgement to adjust the table they are using to represent the plaintiff they are evaluating and, in addition, may need to be prepared to explain why the adjustments were made. Keep in mind, our sample size or N is 1, the individual we are evaluating.

Obviously, in traumatic injuries and death the loss of ability to perform household services is 100%. There are some economists and others who render the opinion in wrongful death cases that the decedent plaintiff would have consumed 50% of the household services they were directly providing and 50% of the household services that the surviving spouse was providing. They do not provide for any quantitative foundation for this opinion, which on its face appears to reflect the opinion that the spouse has benefited because their husband or wife was killed. The author of this article has reviewed reports submitted by economists and others, with this level of consumption by the decedent, but is unable to find any articles or studies which support this opinion. In addition, the author was unable to find any case law which supports a reduction for consumption in wrongful death cases.

Since we are using a hypothetical case in San Diego, CA, let us look at the jury instructions in that state in wrongful death cases, CACI 3921.[7]

The damages claimed by the plaintiff fall into two categories, economic damages, and noneconomic damages. You will be asked to state the two categories

[6] https://www.justia.com/trials-litigation/docs/caci/3900/3921/

[7] https://www.justia.com/trials-litigation/docs/caci/3900/3921/

of damages separately on the verdict form. The plaintiff claims the following economic damages:

1. *The financial support, if any that the decedent would have contributed to the family during either the life expectancy that the decedent had before their death or the life expectancy of the plaintiff, whichever is shorter.*
2. *The loss of gifts or benefits that the plaintiff would have expected to receive from the decedent.*
3. *Funeral and burial expenses; and*
4. *The reasonable value of household services that the decedent would have provided.*
   Your award of any future economic damages must be reduced to present cash value.

There is no mention of a reduction for the consumption of household services by the decedent. Another way to look at this is to ask what percentage of household services performed would have been directly consumed by the person performing them. In the case of a single person living alone, there may be no or minimal household services that would have been for the betterment of someone else. However, in the case of a couple, both people benefit 100% from the household services performed by the other. Household services must be performed 100% for them to be completed. One does not mow half of the lawn, nor do they stop the laundry halfway through and say it is complete, nor can they drive halfway to the grocery store and be able to shop for groceries. Each task must be completed for it to be considered done.

If a legal decision has been made that the loss of household services needs to include a deduction for the services completed by the decedent for their own benefit, then the DVD may be a source of this data. If we return to Table 15, we see statistics which show the percentage of total household production weekly hours benefiting the respondent.

Household Production Weekly Hours for the Benefit of the Respondent	1.27	Population (1,000s) 5,177	850
Percentage of Total Household Production Weekly Hours Benefiting the Respondent	9.3%	Pop. Size Valid %'s Yes	Yes

Definitions	Weekly Hours: Weekly average time in hours where the activity category describes the main activity that was being performed by the respondent. Weekly hours are calculated by summing average Sunday hours plus five times average weekday hours plus average Saturday hours.
Hourly Value:	See tables 386 412.
Dollar Value of a Day	Weekly hours times hourly value divided by seven.
Secondary Child Care:	While performing a primary activity, at wake children under age 13 were in the respondent's care.
With Family:	At least one primary family member (spouse, child, or parent) was in the room or accompanied the respondent.
At Home:	The respondent was inside or outside his or her own home.
Participation Rate:	Percent of population reporting at least one daily episode of the activity.
Standard Error Percent:	Standard error of the mean reported as a percent of the episode mean in the activity.
% of Mean Hours:	Adjustment percentage to weekly hours based on whether living quarters are owned or rented.

Household production weekly hours Respondent related household production divided by the respondent's household size plus 1 plus an additional 1 if for the benefit of the respondent: the respondent's household size is greater than 1. The percentage of the total household production weekly hours benefiting the respondent is respondent benefit household production weekly hours divided by total weekly hours of household production. See Table 413 for description.

Note: 'Who' and 'Where' coding only during waking hours and not coded for sleeping, grooming, some personal and work activities. Percentage of mean hours valid for populations greater than 290,000.

This data is also contained within the other tables and is typically around 10%.

In summary, the DVD can be used by the vocational rehabilitation counselor to help quantify the amount of household services performed by a person before and following an event being litigated. The data allows for adjustments to reflect whether the person was renting or owning their home, the individuals age, their gender, the amount of time they were working, and the composition of their household. The research is so specific that it provides over 380 sets of data for the vocational rehabilitation counselor to choose from.

Sources and tools for assisting in the calculation for the loss of household services include the following:

- https://www.timeanddate.com/
- https://www.ssa.gov/oact/population/longevity.html
- Expectancy Data, *The Dollar Value of a Day: 2019 Dollar Valuation* (2020). Shawnee Mission, KS
- Florida Law http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0600-0699/0627/Sections/0627.736.html
- Quah, Euston. (1986). "Compensation for Loss of Household Services." *Osgoode Hall Law Journal* 24.3: 467-483. Retrieved from http://digitalcommons.osgoode. yorku.ca /ohlj/vol24/iss3/1 (Canada)
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Review: Stuntzer's *Living with a Disability: Finding Peace Amidst the Storm*

Laney Goodwill

Stuntzner's (2012) *Living with a Disability: Finding Peace amidst the Storm* gives the author's firsthand experience of having acquired a disability, as well as a template—or "road map," as she calls it—for individuals with disabilities. The book opens with a lengthy recount of her journey, both before and after her traumatic spinal cord injury which left her with lifelong disability. After the autobiographical introduction, Stuntzner spends the next few chapters painting a picture of how individuals with disabilities have been treated across time and cultures, all the while including personal accounts of her interactions with others, particularly the negative interactions.

The remainder of the chapters are set up more as a how-to for those with disabilities, both inter- and intra-personally, as well as developmentally. Regarding interpersonal communication, Stuntzner suggests when and when not to potentially call out inappropriate social behavior. From an intrapersonal perspective, the author gives various strategies for the reader to work through negative feelings associated with one's disability, such as CBT-like exercises and even prayer. Last, Stuntzner addresses the road map, and gives the reader a guide to moving forward, including confronting obstacles along the way (Chapter Six), learning to forgive (Chapter Seven), "building the life you want" (Chapter Eight), and advocating for oneself (Chapter Nine). The final chapter's focus is on those who take care of and interact with individuals with disabilities, and it gives the author's opinion on how to increase one's self-awareness—including attitudes and perceptions—when interacting with individuals with disabilities.

Living with a Disability: Finding Peace Amidst the Storm provides valuable information, specifically for those who may be earlier in their journey with a disability (though the author states in the forward that it may also "be used as an educative resource for family members and professionals whose lives are intertwined with persons with disabilities" (p. 11)). Once the author begins giving concrete advice for such individuals (beginning approximately Chapter Four), I think the book begins to have more credence. The concrete examples of how to address one's thoughts, feelings, and behaviors involving both inter- and intra-personal experiences certainly have a CBT-like feel to them, which grounds the author's assertions in a valid theoretical framework.

The book is not without its drawbacks, though. First, throughout the book the author insisted on connection with God being a, more or less, essential ingredient for finding peace. In fact, when discussing the self-examination process for individuals with disabilities, the author gives the reader an exercise, then encourages them to "pray about your responses and to offer up to God your difficulties" (p. 102). Given a decline in affiliation with organized religion within the US (Pew Research Center, 2015), *Living with a Disability: Finding Peace Amidst the Storm* limits its potential audience through these references to a higher power.

Another drawback is the book's length—the author makes the same points several times, delivering 100 pages of material in a 200-page book. For instance, the first chapter is the longest, and its focus is the author's personal journey with acquiring a disability. The reader is also given superfluous details. For instance, the

author introduces a clown she met (Baxter the Clown) while in San Francisco, only to have the character disappear from the book shortly afterwards. Further, the author introduces her first teaching job on two separate occasions, which are only a page apart. Such instances may leave the reader confused and longing for brevity.

A final drawback concerns the author's over-reliance on a small subset of authors to substantiate many of her assertions. For example, in the third chapter, the author appears to rely heavily on the work of Rubin and Roessler regurgitating other authors' work (1995; 2001; 2008) and calling into question the validity of the assertions made by Stuntzner. Similarly, a section in chapter eight, *Learning to Leave Mental Barriers Behind*, is largely comprised of the work of Taylor and Epstein (1999). From a research standpoint, such reliance on few authors makes the reader wonder if the assertions the author makes are backed by the preponderance of evidence in the literature or rather by a select few authors in the field.

Overall, Stuntzner's (2012) work may appeal to her intended audience—those for whom inner peace with one's disability has not been achieved. The book comes off as encouraging, which would be refreshing for someone who has not reached a state of equanimity. Additionally, those who work with/for individuals with disabilities may find the work valuable. However, as was previously mentioned, the book's overly religious nature excludes a growing demographic, and though connection with God was important in the journey for Stuntzner, those who do not espouse such a connection may need to look elsewhere for inspiration along their journey.

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