Chapter 5
The Domain of Social Dysfunction in Complex Depressive Disorders

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Abstract Depressive disorders have a major impact on social functioning. In uncomplicated, episodic depression (i.e., major depressive disorder), transient symptoms of social withdrawal and loss of interest in activities are common functional impairments. However, in more complex forms of depression, social dysfunction can be chronic and pervasive, often leading to more severe and intractable functional impairments. This chapter presents a scoping review of the empirical literature that examines the impact of complex depression on five domains of social functioning: occupational functioning, romantic and sexual relationships, leisure activities, affiliation and attachment, and social support networks. Two case studies are presented that illustrate social dysfunction in two predominant forms of complex depression: chronic depressive disorders (CDD) and depression with personality disorder (DPD). These two forms of complicated depression encompass a range of complex depressive disorders as CDD focuses on persistent and non-remitting forms of depression (including dysthymia, pervasive depressive disorder, depressive personality disorder, and double depression), while DPD relates to episodic depression in the presence of co-occurring personality pathology. The limitations of included studies and the need for treatment development (e.g., lack of treatment studies, need for a focus on social dysfunction as a treatment target) for further investigation are discussed.

Keywords Complex depression · Social functioning · Chronic depression · Depressive personality disorder · Occupational functioning · Romantic functioning · Social support · Leisure activities · Affiliation and attachment

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Depressive disorders, including major depressive disorder (MDD), pervasive depressive disorder (PDD), dysthymia, and other forms of "complex" depression, cause profound social dysfunction. Social functioning includes capacities for occupational engagement and commitment, cultivation and maintenance of romantic and sexual relations, nurturance of social support networks, affiliation and attachment, and appreciation and engagement with leisure activities (Chan et al., 2019; Weissman, 1975). Social dysfunction in uncomplicated major depressive disorder (uMDD) is well studied. uMDD is associated with often transient, episodic social withdrawal, social role dysfunction, increased dependency on others, and a lack of interest in interpersonal relations and sexuality (Kupferberg, Bicks, & Hasler, 2016). Prior studies have demonstrated the impact of depression on social functioning, most consistently noting impairments in interpersonal functioning and occupational abilities (Baune & Renger, 2014; Kamenov, Twomey, Cabello, Prina, & Ayuso-Mateos, 2017). Greater functional impairment results in feelings of demoralization, reinforcing depressive symptoms and creating a potentially vicious cycle (Kupferberg et al., 2016; Markowitz et al., 2007). Thus, individuals with ongoing social dysfunction are prone to recurrent depressive episodes (Knight & Baune, 2017).

A comprehensive empirical review of social dysfunction for chronic and complex forms of depression, to our knowledge, has not been conducted. This is significant from a public health perspective because the shorter- and longer-term social dysfunctions in complex depression may be more insidious and more chronically disabling than in uMDD. Specifically, complex depression may involve lower-grade depressive symptoms. However, the longer term and treatment refractory nature of complex depression may create more intractable social dysfunctions not seen in uMDD. This chapter, then, is a *scoping review* (a survey and evaluation of the findings, limitations, and future directions of an existing body of literature) (Munn et al., 2018) of the empirical literature along with representative case studies in two predominant forms of "complex" depression. The first form of complex depression, chronic depressive disorders (CDDs), will focus on social dysfunction studies of dysthymia, pervasive depressive disorder (PDD), depressive personality disorder, and chronic, non-remitting major depressive disorder (including double depression [i.e., dysthymia co-occurring with major depressive disorder]). These disorders share common features of less severe symptoms of depression than uMDD, coupled with a chronic and non-remitting course. The second form of complex depression, depression with personality disorder (DPD), includes personality disorders such as borderline personality disorder (BPD) that have a co-occurring lifetime depressive disorder. For BPD in particular, the rate of lifetime co-occurrence for depressive disorder ranges between 70% and 90% (see Fertuck, Chesin, & Johnston, 2018 for review). DPDs share the clinical features of personality pathology (emotional liability, self-disturbance, unstable or impaired interpersonal relations, and intense impulsive-aggression that impair social functioning) with pronounced depressive symptoms that can co-occur with this personality pathology. This scoping review will summarize and synthesize the CDD and DPD social dysfunction literature separately with an illustrative case for each. A synthesis and conclusion will follow.

5.1 Domains of Social Function in CDD and DPD

Investigators have operationalized the construct of social functioning, and, as a result, numerous psychometric instruments to assess the nature and extent of social deficits have been established (e.g., Birchwood, Smith, Cochrane, Wetton, & Copestake, 1990; Weissman, 1990). Despite this, there is a lack of consensus on how social functioning is optimally mesured, with some studies using self-report tools and others emphasizing clinician interview and observations. Additionally, studies that examine the relationship between complex depression and social functioning tend to utilize self-report measures that provide global functioning scores (e.g., Social Functioning Questionnaire [SFQ; Tyrer et al., 2011]), with only a few studies including measures that distinguish between the various domains of social functioning (e.g., Social Adjustment Scale – Self Report [SAS-SR]; (Weissman & Bothwell, 1976)). Thus, there is a need to differentiate how specific social functioning domains are impacted by complex forms of depressive disorders. In this chapter, we consider social dysfunction according to disruption in the following domains: occupational functioning, romantic and sexual relationships, leisure activities, affiliation and attachment, and social support networks. We define and summarize in the following section the significance of several domains of social functioning relevant to CDD and DPD.

Occupational Functioning Occupational functioning may be defined as the qualities required to effectively serve in an occupational position, including dealing with the physical, environmental, and psychological demands of a work setting (Combs & Heaton, 2016). Occupational functioning is reciprocally related to depression, as functional impairment is a major symptom of depressive disorders, and these deficits can, in turn, negatively impact the course of the pathology. Loss of a sense of self-efficacy, self-worth, and, in some cases, financial stability are typically noted deficits in work function that can be caused by and further reinforce symptoms of uMDD (Daremo, Kjellberg, & Haglund, 2015).

Romantic and Sexual Relations A meaningful and satisfying romantic relationship is important for both partners' psychological and physical sense of well-being, for instance, emotional intimacy in romantic relationships seems to buffer the impact of stressors and increase sexual satisfaction (van Lankveld et al., 2018). Romantic dysfunction can include experiences of partner dissatisfaction, conflicts, chronically stressful and unsupportive environments, and abuse (Daley, Burge, & Hammen, 2000) that can often result in depressive experiences (Davila, 2001). Conversely, depressive disorders seem to have a profoundly detrimental effect on the quality of romantic relationships (Sharabi, Delaney, & Knobloch, 2016). Individuals with uMDD can also demonstrate fixed patterns of communication that tend to burden or alienate their partners (Benazon & Coyne, 2000).

Leisure Activity Interest and engagement in leisure activities includes pleasurable or rewarding activities (e.g., hobbies, sports, creative pursuits, and intellectual

pursuits) that individuals voluntarily engage with in the absence of other occupational or social responsibilities (Zhang & Zheng, 2017). Leisure activities are categorized into two broad domains: social activities that focus on interpersonal interactions (e.g., going out to dinner with friends) and self-focused activities where interpersonal interactions are not the primary focus (e.g., meditating, watching TV; Goodman, Geiger, & Wolf, 2016). While physical exercise can be considered as a form of leisure, most studies suggest that such activities display a different relationship with depressive symptoms (Goodman et al., 2016) and will not be included in our definition. Depressive disorders, particularly uMDD, are partly characterized by anhedonia, or the inability to derive pleasure from normally enjoyable activities during depressive episodes (i.e., activities commonly associated with leisure time) (Nydegger, 2008).

Affiliation and Attachment Affiliation refers to the individual's engagement in positive social interactions with others, whereas attachment is a selective affiliation that occurs in the context of a social bond. Additionally, Kupferberg et al. (2016) document the following social impairments in uMDD within this domain: social anhedonia, increased sensitivity to social rejection, increased altruistic punishment, and excessive use of social media at the cost of in-person activities. Individuals with depression tend to display diminished interest in social interactions that results in difficulties initiating, forming, and maintaining meaningful relationships with other people (Kupferberg et al., 2016). Additionally, uMDD seems to negatively impact the processing of social cues (Ehnvall et al., 2014), and individuals with uMDD are likely to behave in ways that elicit exclusionary events (Joiner & Katz, 1999). For instance, reduced eye contact, social withdrawal and isolation, or excessive reassurance-seeking can lead to greater potential of social rejection (De Rubeis et al., 2017) and consequently reinforce social withdrawal in individuals with uMDD.

Social Support Networks Social support networks can refer to emotional and physical resources provided by an individual's network (e.g., friends, family, community, religious groups, etc.) that can be either emotional or instrumental (Morelli, Lee, Arnn, & Zaki, 2015). The positive impact of strong social support and relationships on mental and physical health has been consistently documented (Leigh-Hunt et al., 2017). The literature on depression asserts the same. Perceived emotional support and large social networks (Santini, Koyanagi, Tyrovolas, & Haro, 2015), as well as the availability and extent of support, are associated with reductions in depressive symptoms (Moos, Cronkite, & Moos, 1998; Wang, Mann, Lloyd-Evans, Ma, & Johnson, 2018). Studies have also examined the bidirectional nature of this relationship, suggesting depressive symptoms can also cause reductions in access to and availability of social resources (Ren, Qin, Zhang, & Zhang, 2018). Social support networks have been assessed in a number of ways, ranging from the use of standardized social support network scales (e.g., Duke Social Support Index; Oddone, Hybels, McQuoid, & Steffens, 2011) to self-reported number of friends or close acquaintances (Oltmanns, Melley, & Turkheimer, 2002). Other assessments focus on the structure and function of networks. Network structures include the size,

frequency of interactions, and availability of aid, while the function of the social network includes subjective experiences of feeling connected and useful to and satisfied by others (Santini et al., 2015).

5.2 Chronic Depressive Disorders (CDD) and Social Dysfunction

Several studies have investigated social dysfunction in chronic depressive disorders (CDD), which include dysthymia (DSM-IV), pervasive depressive disorder (PDD; DSM-5), depressive personality disorder, double depression (i.e., dysthymia or PDD co-occurring with MDD), and non-remitting major depressive disorder (without co-occurring *non*-depressive personality disorder). Though no longer in the DSM-5 or other diagnostic manuals, we include depressive personality disorder as a CDD based on its significant empirical validity (Huprich, 2012). Depressive personality disorder has been reformulated more dimensionally toward a construct of "malignant self-regard" (Huprich, 2014, 2020). The case study at the end of this CDD section of the chapter focuses on the social dysfunction in a case of malignant self-regard.

An early study compared individuals with depression (uMDD, dysthymia, and double depression) to those with chronic medical conditions (e.g., diabetes and arthritis) (Hays, Wells, Sherbourne, Rogers, & Spritzer, 1995). Those with any form of depression exhibited functional impairments in multiple domains that were comparable (and in some ways more severe) than chronic medical illnesses. At the 2-year follow-up, dysthymia was uniquely associated with increases in role limitations due to emotional problems relative to other forms of depression, which generally improved in this functional domain during follow-up. Hays et al. (1995) also document long-term impairments in functioning in dysthymia that are worse than other forms of depressive disorders. Further, the co-occurrence of dysthymia and MDD was associated with the most chronic functional impairments (i.e., double depression only improved on three of eight functional domains, the fewest domains of any group).

A subsequent study (Leader & Klein, 1996) directly compared social functioning in three groups: individuals with dysthymia, double depression, and episodic MDD (i.e., uMDD). While all three depressive groups exhibited significant social impairment, the double depression group was most impaired in both functioning and symptoms relative to the other two groups. Moreover, among individuals with dysthymia, those with more depressive symptoms had the most impaired social functioning, particularly in occupational functioning, extended family, and social role pursuits. While social role functioning was a prime focus in this study, it was noted that the diminished capacity to pursue and enjoy leisure activities was impaired in dysthymia relative to more acute depression. The authors concluded

that CDD is comparable to acute depression in social dysfunction. A strength of the study was the use of semi-structured interviews of functioning rather than self-report.

A related study (Adler et al., 2004) investigated the impact of dysthymia on work functioning among employed primary care patients. Focusing on work functioning both on the job and assessed via absenteeism, these investigators compared individuals with dysthymia (without uMDD) to depression-free controls. Absenteeism was not different between groups, but on-the-job productivity was three times worse in the dysthymia group than the nondepressed group. The authors noted that a current episode of major depression had a more impairing impact on work performance than dysthymia in this cross-sectional design, indicating that severity of depression is the most debilitating factor to predict social dysfunction.

A prospective study that followed a community sample in Zurich for 20 years examined the characteristics of long-term depression versus uMDD (Angst, Gamma, Rössler, Ajdacic, & Klein, 2009). DSM-III-R criteria was used to diagnose a major depressive episode (MDE), while the long-term depression group was defined by the presence of depressive symptoms more days than not for over 2 years along with work or social impairments. Individuals with long-term depression were more often single, had fewer children, were more frequently unemployed, and less often in full-time employment than those diagnosed with uMDD as well as compared to individuals without a depression diagnosis.

Another naturalistic study examined the predictors of both course trajectories and outcomes in individuals with dysthymia over 10 years (Klein, Shankman, & Rose, 2008). Notably, functional impairment was an important outcome measure, in addition to depressive symptomatology. Their sample consisted of adult outpatients diagnosed with early-onset dysthymia with or without a co-occurring MDE. Social functioning was assessed using a modified version of the LIFE (Longitudinal Interval Follow-up Evaluation) semi-structured interview. This version specifically evaluates impairments in work, in school, as a homemaker, and as a parent. Neither pharmacotherapy nor psychotherapy significantly predicted the course of patients' social functioning. Six variables predicted both greater severity of depressive symptoms and more functional impairment at the 10-year follow-up: older age, lower education levels, concurrent anxiety disorder, higher familiar loading for chronic depression, poor maternal relationship, and a history of childhood sexual abuse. Finally, longer duration of dysthymia symptoms predicted greater functional impairment.

A cross-sectional study investigated the impact of CDD on multiple aspects of employee productivity and whether this impact varies depending on the specific work demands (Lerner et al., 2004). They compared individuals with depression (including dysthymia, uMDD, and double depression) to controls across employment sectors (e.g., managers, technical works, service industries, construction, transportation, etc.). Work functioning was evaluated by the Work Limitations Questionnaire (WLQ), a self-report questionnaire that assesses an employee's ability to perform specific job demands, including mental and interpersonal demands, physical demands, time management, and output demands. Depressed employees were two to three times more likely to report that health concerns

interfered with their ability to meet job demands relative to controls. Employees with uMDD or double depression reported higher impairments than those with dysthymia across WLQ domains. The WLQ Productivity Loss Index, a summary score that estimates the amount of health-related productivity loss, provides additional support for the above finding. Dysthymic participants displayed the least on-the-job productivity loss, followed by double depression and then uMDD groups. Finally, employee absenteeism was also measured, with the control group missing a half-day average over a 2-week period compared to 1.4 days for the employees with dysthymia, 1.7 days for those with double depression, and 2.2 days for those with uMDD. The investigators also noted that more severe depressive symptoms and worse physical health related to higher WLQ scores as well as number of days missed at work. As the uMDD and double depression groups displayed greater symptom severity than the participants with dysthymia (determined by the Patient Health Questionnaire-9), this may explain the above pattern of results for the participants in the depressive groups.

Several studies have suggested the course and outcome of depressive disorders is impacted by concurrent social dysfunction. However, it appears that impaired social dysfunction can persist even after the remission of depressive symptoms (Rhebergen et al., 2010). In order to understand the trajectories of social functioning post-remission of a depressive disorder, the investigators followed a community population consisting of a control group and individuals with uMDD, dysthymia, or double depression for 3 years. Remission was defined by the absence of a clear depressive disorder (as determined by the Composite International Diagnostic Interview) after 1- and 3-year follow-ups. Social functioning was assessed using the Groningen Social Disability Score (GSDS) that includes three subscales: domains of social functioning, housekeeping, and leisure time functioning. At baseline, the level of social functioning was poorest in individuals with double depression, followed by those with uMDD and next those with dysthymic individuals. However, at the 3-year follow-up, the individuals with uMDD showed greatest improvement in all domains, followed by those with double depression and dysthymia. Thus, this study reinforces earlier findings that the long-term impact of CDDs on social functioning persists and is greater than uMDD, despite major symptom remission. The investigators speculate that this may be due to residual symptoms of depression and argued that depression recurrence may be partly a result of lingering social deficits. A limitation of the study noted by the investigators was the absence of premorbid assessment of social function, without which it is difficult to know the degree to which long-term social deficits can be accounted for by social functioning before illness onset.

Another cross-sectional study examined social functioning deficits in individuals with current uMDD as compared to those with dysthymia, other non-affective disorders, or no psychiatric diagnoses (Zlotnick, Kohn, Keitner, & Della Grotta, 2000). This study examined interpersonal functioning by assessing the quality of relationships with spouses, relatives, and other family members. Individuals with uMDD reported fewer positive interactions and more negative interactions with their spouse or live-in partner when compared to individuals with no diagnoses and

those with non-affective disorder. However, no significant differences were noted in the quality of relationships across domains when the uMDD group was compared to the dysthymic group, suggesting that depression severity as well as the number of symptoms did not seem to have greater impact on interpersonal functioning. A major limitation of this study was the use of an unspecified quality of relationship measure that the authors noted has unreliable psychometric properties.

A prospective, longitudinal study of individuals with a dysthymia diagnosis over a 9-month period assessed the course of illness of a cohort of dysthymic patients, of which 18% showed symptom remission while the others did not (McCullough et al., 1988). It was noted that individuals with non-remitting dysthymia appeared shy or less sociable while being more compliant and submissive in relationships. These features may have related to feeling unsupported by interpersonal relationships, thereby maintaining dysthymic symptoms in participants.

A review of 19 studies examined the size and quality of social networks in individuals with chronic depression (Visentini, Cassidy, Bird, & Priebe, 2018). Included studies compared individuals with dysthymia to those with uMDD, other forms of psychopathology, and no psychiatric diagnoses across settings such as community, inpatient, and specialized tertiary settings. A variety of diagnostic terms were included (e.g., dysthymia, double depression, chronic depression, etc.) as long as chronic depression was characterized by a continuous 2-year (or longer) duration of depressed mood. Chronically depressed individuals display smaller social networks that are perceived as less satisfying when compared to the networks of healthy participants or those with other psychiatric diagnoses, particularly episodic depression. However, a major limitation of this review pertains to the variability in assessment measures for social functioning across the studies, making it difficult to compare results across studies.

Finally, there have been two studies investigating the impact of treatment and social dysfunction in CDD. The first was a psychopharmacological study (Friedman, Markowitz, Parides, Gniwesch, & Kocsis, 1999) that explored whether social functioning improvements persist after effective antidepressant (desipramine) treatment for dysthymia. To assess social dysfunction, the authors utilized a self-report version of the social adjustment scale (SAS; work, leisure time, family and children, and finances). They studied a cohort of patients with dysthymia who responded well to desipramine at 6 months of follow-up. While symptomatic reductions persisted, social functioning (including enjoyment of leisure time) only modestly improved during the follow-up period. In fact, only 24% of the patients had a "normative" level of social adjustment at 6-month follow-up. The authors note that social impairments are relatively neglected treatment foci relative to symptoms in dysthymia.

The second treatment study investigated the impact of antidepressant medication combined with psychotherapy on social dysfunction. This pioneering study (Hirschfeld et al., 2002) compared three treatments over 12 weeks: nefazodone alone, psychotherapy (Cognitive Behavioral Analysis System of Psychotherapy [CBASP]) alone, and the combination of these treatments for individuals with depressive episodes that were present for more than 2 years. Combined treatment

was associated with greater functional improvement (in both work and social functioning) than either treatment alone. CBASP improved functioning independently of symptom change, and psychosocial gains were not explained simply by greater symptom reduction. Notably, the rate of improvement in functioning was slower than for symptom reduction, strongly suggesting that ongoing intervention is warranted to bolster functioning after symptoms have subsided.

An Illustrative Case of CDD and Social Dysfunction This case example (Huprich, 2019) is of a 27-year-old young professional, Mark, who sought treatment for chronic unhappiness and depression. He had been in brief mental health treatments while obtaining his undergraduate degree, though none of these seemed helpful. He initially denied wanting to consider medication but eventually tried, which yielded no therapeutic benefit. A more biologically oriented course of treatment was also tried, but this produced some deleterious side effects which led him to discontinue the treatment.

Mark often wondered if he could even be treated. He had transient suicidal ideation over the years and wondered if he would eventually kill himself, though he never acknowledged any imminent ideation or plans to do so. By contrast, he wondered if he was worth his therapist's time or effort, thinking that he did not deserve the time or attention given to him. His depressive symptoms intensified over the course of treatment, as he found his work situation more and more intolerable. While Mark was able to function adequately in a work setting, his work did not require a college degree and, thus, was below his potential relative to his level of education. At work, Mark complained he would make recommendations to his colleagues that were never implemented. He described these colleagues as apathetic about the work environment and as not wanting to invest the resources needed to improve their work situation. Mark's energy level decreased; he slept often, had little appetite, and struggled to awaken himself to go to work. While he eventually left his first job, a new position ultimately yielded the same results several months later: depression, apathy, and frustration at his ideas not being enacted and being questioned by a team of people charged with solving systemic problems and difficulties.

Mark's other dysfunction occurred in several ways. He had a limited support network. Though he enjoyed online games with friends out of state, his only immediate social support was his girlfriend and therapist. He pulled away from the gaming as his depressive symptoms increased. While his coworkers often shared the same concerns about the job environment as he did, Mark did not find them to be a source of support. Rather, he was reluctant to say anything to them, for fear of feeling worse. These ideas also highlight Mark's difficulties with affiliation and attachment. He often remained aloof and distant from others, even his therapist. Often approaching treatment with some formality and strong inhibition to directly express intense affects, he infrequently articulated emotions other than unhappiness or mild frustration. Even when discussing the therapeutic relationship, Mark seemed

to recognize the genuine concern expressed by the therapist yet found a way to minimize its impact (e.g., "you are just doing your job").

With regard to his romantic attachments, Mark remained in a committed relationship with his girlfriend and seemed to be able to engage in somewhat regular sexual activity. However, he was reluctant to marry her, fearing that his depression would be so bad that she would ultimately reject him. While the relationship remained committed, he was not willing to have children, fearing that he would bring someone into the world to suffer as he did. Interestingly, he shared later in the course of treatment that his girlfriend was bisexual and was looking toward adding another person into their relationship. Such ideas did not concern him, nor did he feel typical jealousy or betrayal some may feel regarding a possible change in his romantic partner's sexual orientation.

Finally, Mark's leisure interests were very limited. Though he did participate in some online gaming, he reported no other hobbies or leisurely interests. In his depressive state, he would "surf the web" and watch YouTube© videos, which he never found other than mildly entertaining. Later in treatment, he seemed to take some interest in getting more physically active. However, outside of work and daily chores, he engaged very minimally with others.

Summary of CDD and Social Dysfunction Several highlights emerge in the literature on CDD and social dysfunction. First, in the long run, double depression may be the most profoundly impairing on social dysfunction compared to all other depressive disorders (Hays et al., 1995; Leader & Klein, 1996; Lerner et al., 2004; Zlotnick et al., 2000). Moreover, double depression is much more impairing to social dysfunction than common, chronic medical conditions such as diabetes and arthritis. The double "hit" of severe depressive episodes superimposed on chronic lower-grade depressive symptoms leads people to have entrenched and intensifying difficulties in work, interpersonal, and leisure domains. Moreover, the lack of consistently effective treatment options for double depression further compound the impact of the poor social functioning of this group. Secondly, for those with uMDD, while severity of depressive symptoms is the best predictor of short-term impairment in social dysfunction (Adler et al., 2004), over time such dysfunctions tend to *improve* significantly in uMDD. By contrast, for those with CDDs, while short-term social dysfunctions are less impaired (since symptom severity is less intense than uMDD), over time (2 years and beyond) social dysfunctions tend to *worsen* (Angst et al., 2009; Klein et al., 2008; Rhebergen et al., 2010). Thus, CDD may be more insidiously debilitating than uMDD. The incapacity to engage or enjoy any leisure activities emerged as a particularly pronounced area of social dysfunction in CDD (Friedman et al., 1999; Leader & Klein, 1996).

With regard to treatment, CDD appears to respond best to a combination of antidepressant medication and structured psychotherapy for both symptom reduction and social functioning (Hirschfeld et al., 2002). Further, in this study, psychotherapy had more of a positive impact on social functioning than antidepressant medication in CDD. Finally, CDD likely requires longer-term treatment to improve social

dysfunction, which persists long after depressive symptoms improve (Friedman et al., 1999).

5.3 Depression with Personality Disorder (DPD) and Social Dysfunction

Impairments in social functioning are ubiquitous features of personality disorders (PDs) with some form of interpersonal dysfunction represented in each one's diagnostic criteria (APA, 2013). Different forms of personality pathology can exhibit specific patterns of interpersonal distress (e.g., unstable relationships due to a tendency to fluctuate between idealization and devaluation in borderline personality disorder; social inhibition or avoidance due to fear of criticism in avoidant personality disorder). However, the presence of any personality pathology impairs the individual's ability to function effectively in interpersonal settings. Additionally, PDs typically exhibit high rates of comorbidity with other psychopathology, most significantly depressive disorders, which exacerbates existing social impairments (Fertuck et al., 2018). In this section, we will consider studies that examine social dysfunction in individuals with personality pathology and episodic MDD.

A study investigating the impact of PDs on social functioning noted the compounding effects of depression (Newton-Howes, Psych, & Weaver, 2008). Using the Camberwell Assessment of Need and the SFQ, individuals across PD clusters reported greater social dysfunction and unmet social needs. uMDD was the only other disorder that similarly impacted social function in this sample, and the combined effect of PD and depression (i.e., DPD) was related to greater deterioration in social function.

A study examining interpersonal impairments among women compared three groups: those with current uMDD, formerly depressed (remitted uMDD), and those who were never depressed (Hammen & Brennan, 2002). An assessment of the severity of PD features was also conducted. The group of formerly depressed women had the most interpersonal impairment, in areas including marital stability, spousal injury and threatening control, and problems with children, friends, and extended family. This group also reported more stressful life events of an interpersonal nature and reported insecurity in their relations with others. The partners of the formerly depressed women similarly reported lower rates of marital satisfaction. Using the SCID-II interview, it was found that the formerly depressed group exhibited more borderline and dependent personality disorder features than the never-depressed group, suggesting that they exhibited a form of complex depression. It is possible that these personality features contributed to the maintenance of interpersonal dysfunction in the formerly depressed group.

A study investigating social and occupational disability in uMDD patients considered the contributing impact of co-occurring PDs (GÜleÇ & Hocaoğlu, 2011). Participants were divided into depressed and comparison groups using the Hamilton

Depression Rating Scale (HDRS). The Structured Clinical Interview for DSM-III-R; Axis II Disorders was then used to assess for PDs in both groups. The uMDD group displayed higher rates of co-occurring PDs (about 60%) compared to the non-uMDD group (10%). The Short Form-36 (SF-36) scale was used to measure quality of life based on eight dimensions: physical functioning, physical role limitations, emotional role limitations, social functioning, mental health, vitality, bodily pain, and general health perceptions. Depressed participants indicated greater deficits in the domains of physical role limitation, vitality, social functioning, emotional role limitation, and mental health than the non-uMDD group. Additionally, the investigators found that the participants with uMDD and co-occurring PDs showed greater impairments in these domains than those without a PD. Finally, the impact of PD clusters on specific social functioning subscales was examined: while Cluster A PDs showed no significant relationships with any domain, Cluster B PDs displayed a positive correlation with vitality and mental health domains, and Cluster C and Cluster NOS (including self-defeating and passive-aggressive PDs) were negatively correlated with emotional role limitation.

A naturalistic study investigated the compounding impact of co-occurring personality pathology on the social functioning and symptom severity of individuals with uMDD (Skodol et al., 2005). Individuals that met criteria for one of four PDs (schizotypal, borderline, avoidant, and obsessive-compulsive) were included in the uMDD with co-occurring PD group. Additionally, the study recruited from a variety of settings, including outpatient mental health, psychiatric inpatient, and other medical settings. The SF-36 was used to assess physical as well as social and emotional functioning. The latter was measured by four subscales: vitality, social functioning, emotional role limitations, and emotional well-being. These subscales address a wide range of concerns including impaired functioning of normal social activities with family, friends, and other social groups as well as concerns with work or other daily activities. Individuals with DPD displayed poorer functioning on all domains than individuals with uMDD only. In particular, domains of emotional role limitations, social functioning, and general health perceptions were poorest in DPD.

A related study examined the relationship between DPD and long-term social dysfunction (Markowitz et al., 2007). Using the DSM-IV-R diagnostic criteria, participants were divided into three study groups: individuals with uMDD alone, uMDD with persistent and co-occurring PD, and uMDD with remitted comorbid PD. Participants with schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders were included. About 40% of the participants with PD remitted during the 2-year period as assessed by a modified, follow-along version of the Diagnostic Interview for DSM-IV Personality Disorders (remission was noted by the presence of two or fewer criteria over 12 consecutive months). Social functioning was assessed by the Longitudinal Interval Follow-up Evaluation (LIFE) psychosocial scales, which included items relating to employment; interactions with friends, partner, and parents; recreation; global social adjustment; and the DSM-IV Global Assessment of Functioning (GAF). At baseline, the uMDD-only group functioned at significantly higher levels compared to both the PD groups. However, at the 2-year follow-up, the uMDD with remitted PDs group improved significantly,

almost catching up with the uMDD group, while the uMDD with non-remitting PD group showed least improvement across domains. The exception was parental relationships, wherein the remitted PDs group did not display significant improvement at follow-up. Finally, the individuals with non-remitting PDs displayed no significant changes in GAF scores over 2 years, remaining in the low 50s (reflective of moderate impairments in social, occupational, or school functioning).

A prospective study examining treatment outcome predictors of uMDD found that extant PDs and certain psychosocial variables were associated with non-complete remission of uMDD and, in some cases, persistence of moderate to severe depressive symptoms (Ezquiaga, García, Pallarés, & Bravo, 1999). Twenty-four percent of the sample displayed partial symptom remission and 17% showed no remission at the 12-month follow-up. The presence of a PD, smaller social network sizes, and less satisfaction with the quality of social support were all associated with the persistence of uMDD symptoms at follow-up. These relationships were reexamined in a subsequent study on a different sample of uMDD participants, wherein existing personality disorders predicted non-remission but not size of and satisfaction with social support networks (Ezquiaga et al., 2004). However, poor quality of life 6 months prior to the current MDE was also associated with lower rates of complete remission. The Quality of Life Scale was used to measure this variable on four dimensions: social support, general satisfaction, physical/psychological well-being, and absence of work overload/free time.

A study investigating the impact of co-occurring PDs on the treatment outcomes of uMDD followed participants in four treatment groups for 16 weeks: cognitive-behavioral therapy, interpersonal therapy, imipramine with case management, and placebo with case management (Shea, Widiger, & Klein, 1992). Social functioning was measured by the Social Adjustment Scale (SAS) that includes scales for social and leisure activities as well as occupational functioning. A majority of uMDD participants displayed co-occurring PD diagnoses (about 74% of the sample), and these individuals had worse outcomes in all social functioning domains except work function. Additionally, the presence of a PD was associated with residual uMDD symptoms posttreatment. The investigators noted that PD clusters or treatment type did not have a significant impact on these findings.

A treatment study similarly demonstrated the negative impact of co-occurring PDs on uMDD treatment and recovery (Patience, McGuire, Scott, & Freeman, 1995). Participants with uMDD were randomly assigned to four treatment groups: regular care with a general practitioner, psychopharmacological treatment with amitriptyline, cognitive-behavioral therapy, and counseling with a social worker. Follow-up assessments of depressive symptoms and social functioning were conducted at the end of treatment (16 weeks) and then at 18 months to determine long-term functioning. It was noted that, despite overall improvement posttreatment, depressed participants with PDs showed worse social functioning than depressed participants without a PD. However, at the 18-month follow-up, no differences were noted in self-reported social functioning between the groups. The investigators surmise that the presence of personality pathology likely delays recovery in individuals with uMDD, specifically with respect to functional impairments.

Most treatment studies examine the effect of a co-occurring PD on the trajectory of uMDD. However, this randomized controlled trial of three psychological treatments investigated the negative impact of comorbid uMDD on the recovery and psychosocial outcomes of individuals with PD (Renner, Bamelis, Huibers, Speckens, & Arntz, 2014). Remission from PDs was defined by no longer meeting the diagnostic criteria on the Structured Clinical Interview for DSM-IV Personality Disorders at 3-year follow-up. Participants mostly had Cluster C diagnoses (92%) and were assigned randomly to schema therapy, clarification-oriented psychotherapy, and treatment as usual groups. Baseline evaluations indicated that participants with co-occurring uMDD displayed lower Global Assessment of Functioning (GAF) scores as well as impaired social and occupational functioning. These participants also experienced lower rates of recovery from PDs posttreatment compared to participants without a comorbid uMDD diagnosis at baseline – an effect that did not differ between treatment conditions. Additionally, despite some improvement, the lower baseline social functioning levels noted in participants with uMDD do not catch up to the posttreatment functioning levels of participants without uMDD.

An Illustrative Case of DPD and Social Dysfunction Leah, as a 22-year-old college graduate of European descent, was diagnosed with BPD and recurrent MDD in her third year of undergraduate studies, having had two hospitalizations while completing her degree. She found herself regularly feeling hopeless and unmotivated. Leah had a boyfriend who appeared to offer regular support, though her mood state frequently remained dysphoric and uncertain about her future. Previous treatment in dialectical behavior therapy was not helpful, so she sought out treatment from a psychodynamically oriented clinician. In this treatment, Leah described sadness, helplessness, and pessimism, thinking that there was no meaning or purpose in her life, which thus led to her frequent suicidal ideation. Evenings were very problematic, as she would find her depressive feelings intensifying, even sometimes taking a belt and putting it around her neck, fantasizing about hanging herself. Leah believed that no one appreciated her misery but that after she died, she imagined others would finally understand how much she had suffered.

Leah had received high grades in a scientifically oriented degree. She moved home after graduation, which evoked strong ideas of being oppressed and disapproved of by her parents. She had very little identity of her own around her mother, complying with most everything she said. However, her resentment grew and was highest at night. Leah remained at her parents' home, believing that she could not leave without permission. She was evasive of the therapist's questions about her own ideas, only repeating what her mother's opinions were about her future and life outcome. Most notably, she considered that she should take a job out of state (which her mother strongly pressed for), even though she wanted to remain at home and stay in treatment with her therapist.

Like Mark (described earlier), Leah's only social support was her romantic partner (boyfriend), who happened to live hundreds of miles away. She had few other friends with whom she communicated, and most of her life was lived in isolation in her room at her parents' house. Though she had an older brother at home, their

relationship was strained since Leah believed he did not care much about her suffering of distress. Leah seemed to appreciate the frequent weekly sessions with her therapist but did little to seek out other friendships. Likewise, her relationships toward others were detached and disinterested; however, once relationships moved into friendships, she believed she could share more intense ideas and feelings. Yet, she failed to incorporate the support of others, frequently questioning if they had her best interests in mind, including her therapist, who often found her to wait silently for him to offer ideas of support.

Leah had only one romantic partner, who was patient and committed to her. It was unclear to what extent they were sexually involved, and Leah never spoke about her sexuality or sexual interests. Leah's mood seemed dependent upon the support and availability of her boyfriend. In fact, one of her suicide attempts occurred after leaving a party early and feeling as if her boyfriend did not care. Hence, there was less interest in mutual romantic satisfaction but instead more of a need-gratifying orientation toward her boyfriend. By all accounts, the relationship was one of dependency and not mutual liking.

As one might imagine, Leah had no outside hobbies or activities. Like Mark, she would watch YouTube©, television, or movies, all from home. Even as a university student, it was unclear that Leah engaged in anything other than school and spending time with her boyfriend and a few people who lived in the same dormitory. Consequently, her life appeared empty, which corresponded to the lack of meaning she often described.

Summary of DPD and Social Dysfunction While the literature examining the relationship between DPD and social functioning is limited, a few major findings are noted in the above studies. First and most notably, DPD is associated with a far greater level of social dysfunction than other forms of psychopathology (Newton-Howes et al., 2008), and the combined effect of DPD is associated with significantly worse impairments than the independent effects of uMDD or PD across domains of social function (GÜleÇ & Hocaoğlu, 2011; Markowitz et al., 2007; Renner et al., 2014; Skodol et al., 2005). The synergistic impact of depression and personality pathology shows enduring and deleterious effects on social function even in the context of PD or uMDD remission (Hammen & Brennan, 2002; Markowitz et al., 2007). Given the early development and chronicity of interpersonal difficulties in PDs, it is unsurprising that functional impairment persists. Similar to CDD (described above), the lack of effective treatment options available for DPD further contributes to the maintenance of these impairments. Secondly, the relationship between DPD and social dysfunction was consistently observed across PD clusters and severity despite variations in their presentation (Hammen & Brennan, 2002; Markowitz et al., 2007; Skodol et al., 2005), which is indicative of the pervasive and intense nature of functional impairment in individuals with DPD. However, few studies examined the differential effects of PD clusters on social function domains, making it difficult to understand the specific pathological personality features that contribute to social impairments in these individuals.

Finally, extant personality disorders have a negative impact on the course and prognosis of social functioning in depressive disorders (Ezquiaga, García et al., 1999; Ezquiaga, García-López et al., 2004; Mulder, 2002; Shea et al., 1992). DPD individuals seem to benefit less from treatment and display persistent depressive symptoms as well as higher rates of recurrent episodes than individuals with depression and no PD (Ezquiaga, García et al., 1999; Ezquiaga, García-López et al., 2004; Hart, Craighead, & Craighead, 2001). The moderating effects of PDs on the maintenance of social impairments associated with uMDD and vice versa suggest that more long-term, targeted treatments may be needed to improve functional impairments in DPD.

5.4 Conclusions and Future Directions

While both CDD and DPD are associated with profound and chronic social dysfunction compared to uncomplicated MDD, this scoping review suggests two potentially contrasting trajectories of social dysfunction between CDD and DPD. The adult trajectory of social dysfunction in CDD – particularly double depression (Hays et al., 1995; Leader & Klein, 1996; Lerner et al., 2004; Zlotnick et al., 2000) – may be analogous to an incremental but pervasive decline over time. The analogy for CDD is to a long, gradual ramp ending in severe social dysfunction, touching nearly all domains (e.g., the case of Mark). By contrast, DPD has an adult trajectory that begins with significant impairment in multiple social functions (likely reflecting the impact of the PD, which typically has a late adolescent onset). However, rather than a gradual decline, DPD appears to exhibit plateaus and valleys, the valleys occurring when there is an intensification of depressive symptoms in the context of the PD, after which some improvement back to the relatively low baseline level of functioning can occur (e.g., the case of Leah). These potential trajectories of social dysfunction, a slow decline in CDD and a low plateau with even lower valleys in DPD, warrant further longitudinal investigation.

While there are no unambiguous comparisons between CDD and DPD in the literature, it appears that social dysfunction in DPD is associated with more turbulent relationship instability (Hammen & Brennan, 2002; Markowitz et al., 2007), whereas CDD is more associated with a lack of motivation or inhibition in pursuing social relations (Leader & Klein, 1996; Rhebergen et al., 2010). Both the case illustration (Leah) and the DPD literature suggest that disruption in close or romantic relationships precipitate worsening depressive symptoms and subsequent "valleys" in social functioning.

With regard to treatment implications, for both CDD and DPD, social dysfunctions are more treatment resistant than depressive symptoms themselves. Treatment development for CDD and DPD needs to target *both* symptom reduction and functional improvement. In terms of long-term improvement and stability of change, social functioning may be more important to nurture and sustain than symptomatic improvement. While data is limited to one study, it appears that structured

psychotherapy confers the most benefit for social functioning, and combined psychotherapy and antidepressant medication for symptoms. Intervention for BPD (e.g., transference-focused psychotherapy [TFP]) (Radcliffe & Yeomans, 2019), for instance, requires that patients agree to explicit goals around occupational roles as a precondition for treatment, which may be worth incorporating in the treatment of CDD and DPD. Moreover, examining the impact of leisure activities (particularly aerobic exercise) on psychological well-being is a potential low-cost, alternative treatment for individuals with depression (Blumenthal et al., 2007) and anxiety (Martinsen, 2008) that is worth examining in CDD and DPD as adjunctive interventions. Engaging in recreational activities can distract individuals from the experience of depression and promote feelings of well-being by increasing perceptions of social support or self-improvement (Chang, Wray, & Lin, 2014).

The therapeutic alliance, which is generally regarded as one of the strongest predictors of treatment gain in psychotherapy (Horvath, Del Re, Flückiger, & Symonds, 2011; Wampold, 2015), is negatively impacted by depressive symptoms. However, the capacity to establish an early alliance in treatment of individuals with CDD predicted improvements in symptoms (Barber, Khalsa, & Sharpless, 2010; Klein et al., 2003). Additionally, strong early alliances that would be able to withstand and repair future alliance ruptures predicted significant improvements in symptoms of personality disorder and CDD (Strauss et al., 2006). Strains and ruptures in the alliance are frequently observed in the treatment of personality disorders and often lead to treatment noncompliance and premature termination (Jin, Sklar, Min Sen Oh, & Chuen Li, 2008). Thus, DPD seems to be associated with poorer working alliances and treatment compliance rates (Andreoli, Gressot, Aapro, Tricot, & Gognalons, 1989). One study found that more severe depression negatively impacts the therapeutic alliance in the treatment of BPD (Richardson-Vejlgaard, Broudy, Brodsky, Fertuck, & Stanley, 2013), suggesting that reducing depressive symptoms early on the treatment of PDs will enhance treatment outcomes as well.

Other high priority areas for future investigation include developing more refined measures of social dysfunction that are not confounded by symptom severity, since in CDD and DPD, social dysfunction can be difficult to disentangle from symptoms. Further, future investigations could better differentiate the domains of social dysfunction between uMDD, CDD, and DPD and over the course of these disorders. Relatedly, the impact of different expressions of DPD (i.e., BPD, narcissistic PD, or Cluster A PDs) on social dysfunctions has not been sufficiently investigated. Finally, potential gender, biological sex, social class, and cultural influences on social dysfunction in CDD and DPD are a ripe area of investigation.

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