# Chapter 10
# Towards a Better Understanding of Post-Deployment Reintegration

**Donald R. McCreary, Jennifer M. Peach, Ann-Renée Blais, and Deniz Fikretoglu**

**Abstract**  Although researchers have examined the 6–12 month period after which service members return home from an overseas deployment, their studies often focus on members' mental and physical health (e.g., whether or not the member is displaying symptoms of post-traumatic stress disorder or a minor traumatic brain injury). In this chapter, we take a different approach to the post-deployment reintegration period, focusing instead on the positive and negative experiences and perceptions associated with three domains that returning service members have told us are important: reintegrating back into a garrison work environment, reintegrating back into one's family, and integrating the deployment experiences into one's personal identity. In addition, the chapter describes the development and validation of the Post-Deployment Reintegration Scale (PDRS), which we created to support our research, as well as the construction and use of norms for the PDRS. Finally, we

D.R. McCreary, Ph.D. (✉)
Psychology Group, Individual Behavior and Performance Section,
Defence Research and Development Canada – Toronto,
1133 Sheppard Avenue West, Toronto, ON, Canada M3C 2K9

Individual Behavior and Performance Section, Defence Research and Development
Canada – Toronto, 1133 Sheppard Avenue West, Toronto, ON, Canada, M3C 2K9
e-mail: Don.McCreary@drdc-rddc.gc.ca

J.M. Peach, Ph.D.
Director General Military Personnel Research & Analysis, Department of National Defence,
285 Coventry Road, Ottawa, ON, Canada K1K 3X6
e-mail: Jennifer.Peach@forces.gc.ca

A.-R. Blais, Ph.D. • D. Fikretoglu, Ph.D.
Psychology Group, Individual Behavior and Performance Section,
Defence Research and Development Canada – Toronto,
1133 Sheppard Avenue West, Toronto, ON, Canada M3C 2K9
e-mail: Ann-Renee.Blais@drdc-rddc.gc.ca; Deniz.Fikretoflu@drdc-rddc.gc.ca

focus on single service members, looking at the degree to which marital status and whether or not someone has dependents influence the post-deployment reintegration experiences and perceptions captured by the PDRS.

**Keywords**  Post-deployment reintegration • Family reintegration • Work reintegration • Personal reintegration • Single-service members

## Background

The military deployment cycle is often thought of as a three-stage process. The initial part is the pre-deployment stage, where service members train for the upcoming mission. This training period can last upwards of 12 months and may often take members away from home for extended periods of time. The deployment stage covers the period during which members are in the theater of operations. Deployments tend to be 6–15 months long (depending on the mission, the country deploying the service members, and their role on those deployments). Finally, there is the post-deployment reintegration period, where returning military personnel re-establish themselves back into both their regular jobs and their prior social networks, as well as put their deployment experiences into perspective. The reintegration process starts as soon as service members arrive back home and may last several months (Thompson & Gignac, 2002).

The challenges faced by individuals during the post-deployment reintegration period can be persistent and stressful (e.g., Bartone, Adler, & Vaitkus, 1998; Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998; Wilson & Krauss, 1985). Indeed, researchers have recently shown that individuals returning from a deployment are at increased risk for a wide range of mental health concerns, including PTSD (Basham, 2008; Ford et al., 2001; Hoge et al., 2004; Wain, Bradley, Nam, Waldrep, & Cozza, 2005), depression and anxiety (Adler, Bliese, McGurk, Hoge, & Castro, 2009; Morissette et al., 2011; Wright, Foran, Wood, Eckford, & McGurk, 2012), alcohol and drug use (Jacobson et al., 2008; Tucker, Sinclair, & Thomas, 2005), and both suicide and alcohol-related death (Hendin & Pollinger-Haas, 1991; Thoresen & Mehlum, 2004). Additional research suggests that returning service members are at greater risk for increased levels of aggression (McCarroll et al., 2000; Wright et al., 2012), reckless driving and danger seeking (Killgore et al., 2008), marital problems (Basham, 2008; Sayers, 2011), burnout (Harrington, Bean, Pintello, & Mathews, 2001; Hourani, Williams, & Kress, 2006; Tucker et al., 2005), difficulty finding meaning in life (Bowling & Sherman, 2008), and negative attitudes towards work (Yerkes & Holloway, 1996). Data also have shown that rates of mental health symptoms tend to increase throughout the post-deployment reintegration period (e.g., Bliese, Wright, Adler, Thomas, & Hoge, 2007; Milliken, Auchterlonie, & Hoge, 2007; Thomas et al., 2010).

The majority of the research studying the reintegration stage of the deployment cycle has typically focused on the links between stressors or trauma experienced during the members' deployment and post-deployment clinical issues or psychosocial problems. In comparison, studies focusing on the positive impacts of

deployment on reintegration are less common. Still, researchers have found that deployment can have several benefits, including exposing members to new environments, heightening their world awareness, and developing new strengths and skills (Basham, 2008). Deployment also has been associated with a renewed sense of purpose and meaning *vis a vis* members' jobs and life in general (e.g., Litz, Orsillo, Friedman, Ehlich, & Batres, 1997; Maguen, Vogt, King, King, & Litz, 2006; Mehlum, 1995), happiness when reconnected with their families (Pincus, House, Christenson, & Adler, 2001), and strengthened relationships with others (Newby et al., 2005). Similarly, research on post-traumatic growth indicates that combat exposure can lead to both costs and growth (Aldwin, Levenson, & Spiro, 1994; Tedeschi & Calhoun, 1996), while Adler, Zamorski, and Britt (2011) suggest that, in addition to emotional, cognitive, and social benefits, reintegration can have both positive and negative outcomes in the physical domain. Positive physical outcomes can include enjoying the comforts of home again, relief from extreme temperatures, and the ability to prepare a meal, while negative outcomes can include hypervigilance to threat and difficulty sleeping.

In 2002, a group of researchers at Defence Research and Development Canada's Toronto laboratory (including the third and first authors of this chapter) began a more in-depth study of the post-deployment reintegration stage. At that time, there was a lot less research on post-deployment reintegration, and much of it was focused on studying the adverse clinical consequences of deployment (e.g., Orsillo et al., 1998). Over the next several years, we developed a general model outlining the prominent non-clinical aspects of post-deployment reintegration, a measurement tool to assess the model (Blais, Thompson, & McCreary, 2009), as well as norms for the measure (Fikretoglu & McCreary, 2010) so that users had an effective way to communicate information about the aspects of post-deployment reintegration the model and its measure assessed. The primary purpose of this chapter is to describe this program of research. Additionally, we will focus on single service members, with and without children, in order to better understand their experiences in the post-deployment reintegration period.

## Developing a Model of PDR

When thinking about service members' post-deployment reintegration experiences, our original team (Blais, Thompson, Febbraro, Pickering, & McCreary, 2003) was guided by two overarching goals. First, we felt that our understanding of post-deployment reintegration and its effects on individual service members should not be focused solely on the negative, adverse, or clinical aspects of this period. That is, members' experiences can be both positive and negative. Focusing on only one of these two dimensions can seriously misrepresent both the content and process of the reintegration stage of the deployment cycle.

Our second goal was to highlight the fact that reintegration was not a unidimensional construct. In an initial study led by one of our original team members (Thompson & Gignac, 2002), focus groups were conducted with Canadian Forces

(CF) members returning from an overseas deployment. Findings suggested that there were four main themes associated with post-deployment reintegration: (1) reintegrating back into one's work environment; (2) reintegrating back into one's family; (3) reintegrating back into one's Western, privileged culture; and (4) dealing personally with one's deployment experiences.

Thus, in our model, service members' perceptions and experiences of their post-deployment reintegration period should be focused on both the positive and negative aspects of reintegrating in each of these domains. However, as we note in the next section, it was difficult to operationalize the cultural reintegration dimension. After several attempts to develop and validate items that addressed cultural reintegration, we decided to drop that domain from our model of post-deployment reintegration, leaving only the work, family, and personal domains (although some items were included in the two personal domain subscales that reflect the intersection between the personal and the cultural aspects of post-deployment reintegration; see Blais et al., 2009, for a more in-depth discussion of why these aspects of the model are salient).

## Development and Validation of the Post-Deployment Reintegration Scale

To study post-deployment reintegration from the context of our model, we developed the Post-Deployment Reintegration Scale (PDRS). This was done using an iterative process, over a series of studies.[1] A brief overview of these studies and their findings are presented in this section. For more detailed information, see Blais et al. (2009).

### *Post-Deployment Reintegration Scale: Development*

The initial version of the PDRS contained 64 positive and negative items in the four initial domains: Work, Family, Personal, and Cultural (Blais et al., 2003). However, an exploratory factor analysis (EFA) on the responses from 374 CF personnel who

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[1] To get the large sample sizes of deployed CF members required to develop and validate the PDRS, we received permission to include the scale in the CF's post-deployment Human Dimensions of Operations (HDO) survey, a large, regularly given omnibus set of questionnaires designed to give CF commanders a broad overview of a wide range of potential post-deployment personnel issues (e.g., Brown, 2005a, 2005b, 2005c). Including the PDRS in the post-deployment HDO survey was desirable for two reasons. First, our team felt that individuals needed time to adjust; time to develop post-deployment reintegration-related experiences and perceptions. As we had little information about how that process worked, we felt that the timing provided by the HDO survey was an appropriate starting point. Second, the HDO survey also included other measures that we could use to assess the validity of the PDRS.

had returned from a deployment to Afghanistan 6 months earlier suggested that there was a fair degree of overlap between the personal and cultural dimensions of the PDRS. To address this issue, we worked with a subject matter expert (i.e., a senior Army officer with numerous overseas deployments) to refine several existing items and to add additional ones. The revised version of the PDRS had a total of 81 items and was administered to 474 CF service members who had also deployed to Afghanistan approximately 6 months earlier. The findings from an analysis with a subsample of that data revealed, again, that there were statistical problems with the cultural reintegration items. Thus, we decided to drop the cultural domain from our model, moving the items that best reflected the intersection between the personal and cultural domains into the personal reintegration domain. We then used a second subsample to test the remaining six-factor, three domain (positive and negative dimensions of work, family, and personal post-deployment reintegration) model. The EFA revealed the expected latent factor structure and Cronbach alpha estimates of internal consistency ranged between .78 and .91.

However, because multivariate statistics can sometimes be difficult to replicate, we felt it was important to be rigorous and repeat our EFA in an independent sample of 519 CF members who had deployed to Afghanistan. The sample was randomly split into two, and these two new EFAs both replicated the earlier one, showing that the six-factor, three domain model is best represented in the PDRS. In addition, those six scales showed appropriate levels of internal consistency, with Cronbach alphas ranging from .78 to .89.

Given these findings, we were confident that the item structure of the PDRS matched our post-deployment reintegration model. The final version of the PDRS (which we sometimes refer to as the Army PDRS, because it was developed and validated solely on Army personnel) can be found in Table 10.1. In that Table, the items are organized by their subscales, though the item numbers to their left reflect their actual position in the scale when it is presented to participants.

## Post-Deployment Reintegration Scale: Validation

In addition to the construct validation offered by the exploratory factor analyses, Blais et al. (2009, Study 3) also reported findings from analyses that examined the correlations between the PDRS subscales and several personal and organizational variables (described below) which were logically expected to be related to the PDRS model. With regard to psychological well-being, findings showed that, as expected, higher scores on the negative work, family, and personal aspects of post-deployment reintegration were correlated with higher levels of self-reported symptoms of depression and post-traumatic stress disorder.

Service members who reported higher levels of overall deployment-related stress also reported higher levels of negative family and personal reintegration experiences and perceptions. The deployment-related stress measure used in the HDO survey at that time could also be broken down into five subscales: military career,

**Table 10.1** Items and instructions for the post-deployment reintegration scale (Blais et al., 2009)

| | Scale instructions: There are no right or wrong answers to the following questions. People may have differing views, and we are interested in what *your* experiences are. **Please indicate the extent to which each of the statements below is true for you since returning from [insert deployment name]:** |
|---|---|
| Item | **Work Positive** |
| 1. | I am glad I went on the tour. |
| 7. | I am applying job-related skills I learned during my deployment. |
| 10. | I am better able to deal with stress. |
| 20. | I feel I am a better soldier. |
| 27. | I am proud of having served overseas. |
| 34. | I have developed stronger friendships. |
| Item | **Work Negative** |
| 5. | I find military bureaucracy more frustrating. |
| 12. | I feel my current work duties are less meaningful. |
| 17. | Day to Day work tasks seem tedious. |
| 22. | Garrison life has been boring. |
| 30. | I feel a lower sense of accomplishment at work. |
| 32. | I have considered leaving the military. |
| Item | **Family Positive** |
| 2. | I feel closer to my family. |
| 8. | I have become more responsive to my family's needs. |
| 13. | I have become more involved in my family relationships. |
| 23. | I have realized how important my family is to me. |
| 28. | I have a greater willingness to be with my family. |
| 36. | I more fully appreciate the time I spend with my family. |
| Item | **Family Negative** |
| 4. | There has been tension in my family relationships. |
| 11. | I feel the tour has had a negative impact on my personal life. |
| 15. | I feel my family has had difficulty understanding me. |
| 18. | The tour has put a strain on my family life. |
| 25. | Getting back "into sync" with family life has been hard. |
| 31. | I feel my family resented my absence. |
| Item | **Personal Positive** |
| 6. | I am more aware of problems in the world. |
| 14. | I have a better understanding of other cultures. |
| 19. | I have realized how well off we are in Canada. |
| 24. | I have a greater appreciation of the value of life. |
| 29. | I have a greater appreciation of the conveniences taken for granted in Canada. |
| 33. | I more fully appreciate the rights and freedoms taken for granted in Canada. |
| Item | **Personal Negative** |
| 3. | Putting the events of the tour behind me has been tough. |
| 9. | I have had difficulty reconciling the devastation I saw overseas with life in Canada. |
| 16. | I have been confused about my experiences during the tour. |
| 21. | It has been hard to get used to being in Canada again. |
| 26. | Being back in Canada has been a bit of a culture shock. |
| 35. | Focusing on things other than the tour has been difficult. |

work, family, combat, and external conditions. The findings showed that the negative PDRS scales tended to be correlated with most aspects of deployment stress and, as might be expected, were more strongly associated with deployment stress than the positive subscales from the PDRS.

The PDRS subscales also were correlated with several organizational measures, in logically predictable ways. For example, higher Work Positive scores on the PDRS were correlated with higher levels of positive job-related affect. Furthermore, this correlation was higher than those between the Family Positive scale and positive job-related affect, as well as between the Personal Positive scale and positive job-related affect. Similarly, higher scores on the negative PDRS subscales, especially the Work Negative PDRS scores, were correlated with higher levels of negative job-related affect. Work Negative PDRS scores also were correlated with an increased likelihood of wanting to leave the CF in the next year.

We have also explored the consistency of responses to the PDRS over time (McCreary, Blais, & Thompson, 2008). This is commonly done in the development of self-report questionnaires because many psychological constructs (e.g., personality traits) are expected to be stable over time. Our assumption for the PDRS was not one of stability, but rather one of change and adaptation. That is, we expected there to be statistically significant differences in PDRS scores over time, especially as service members started to feel more comfortable in their traditional environments, and re-established their relationships and routines. One hundred fourteen CF personnel returning from a deployment to Afghanistan completed the PDRS at approximately 5 months post-reintegration, and again approximately 6 months later. Paired sample *t*-tests showed no significant differences between the 5- and 11-month scores on any of the six PDRS subscales. Ongoing work is exploring why this might be the case. For example, it may be that some people's post-deployment reintegration experiences and perceptions improve over time, while others may get worse or stay the same. In a sample such as the one we described here, if there are different subsets of people experiencing these three reintegration processes, those positive and negative changes across groups may average out statistically to no change, effectively masking an important phenomenon. If these three groups exist, we hope to be able to identify them and study the reasons for the differences.

## Post-Deployment Reintegration Scale: Updated Findings

The previous section of this chapter summarized our previously published findings from the initial development and validation of the PDRS (Blais et al., 2009). Since then, over 3,000 PDRS data points have been generated. Those additional cases have allowed us to develop a more detailed understanding of the PDRS. In this section we will be presenting three updated findings from our PDRS research that we think are highly pertinent: (1) differences in mean scores between the PDRS positive and negative subscales; (2) correlations among all six subscales; and (3) norms for the PDRS subscales.

As with the PDRS development, we relied on the CF post-deployment HDO survey to collect all of our follow-up data. A total of 3,006 CF personnel completed the survey between August 2004 and February 2007. All had returned from the NATO mission in Afghanistan approximately 6 months prior to the data collection (Fikretoglu & McCreary, 2010). The questionnaire package was administered in mass-testing sessions on military bases by a Personnel Selection Officer or was mailed to augmentees and individuals who transferred to new units. The sample was composed primarily of Regular Force members (93.3 %), who were male (88.6 %). Over half the sample was married (59.7 %) with children (52.8 %). See Table 10.2 for a more detailed description of the sample's demographic characteristics.[2]

## *The Relationships Among the Post-Deployment Reintegration Scale's Subscales*

When we compared the means from the positive subscales to their corresponding negative subscales (i.e., Work Positive to Work Negative; Family Positive to Family Negative; Personal Positive to Personal Negative), it became clear that CF members were reporting more positive than negative post-deployment experiences in all three domains. As shown in Table 10.3, the effect size statistics for our *t*-tests demonstrated that the mean differences between the positive and negative subscales in all three analyses were all either large or very large (Hyde, 2005), with the differences in the Family and Personal domains being the largest.

Additionally, the positive and negative subscales tend to be orthogonal (Table 10.4). That is, returning service members are reporting both positive and negative post-deployment reintegration experiences and perceptions. Another way of saying this is that having a lot of positive post-deployment reintegration experiences and perceptions does not preclude the same people from also reporting a lot of negative post-deployment reintegration experiences and perceptions. However, the correlations also demonstrate that reintegration experiences of the same valence are correlated, suggesting there is a tendency for good and bad experiences to permeate across domains.

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[2] Before beginning our data analyses, we screened the data for univariate normality, outliers, and assessed missing data (Kline, 2010). None of the PDRS scale items met Kline's criteria for excessive skewness or kurtosis. To check for outliers we standardized items and noted any with absolute values greater than 3.29. Responses to items 1, 9, 16, and 27 contained outliers. We used the Windsor technique (Kline, 2010) to trim values that had absolute *z*-score values greater than 3.29 back to the next highest score, eliminating all item-level outliers. In all, 330 of the 3,006 participants had missing data on some of the PDRS items. To minimize missing data, we computed the mean for each subscale if participants had completed at least half the items in the subscale. We next assessed each subscale for normality and used the Windsor technique to trim back scores on the Personal Negative subscale. Third, we excluded cases which had no score on at least one of the subscales, resulting in 2,974 valid cases for each sub-scale (i.e., 32 excluded cases).

**Table 10.2** Demographic characteristics of the post-deployment reintegration scale norming sample (N = 2,974)

| Variable | Category | N | % |
|---|---|---|---|
| Military Status | Regular Force | 2,775 | 93.3 |
| | Reserve Force | 154 | 5.2 |
| Military Rank | Junior Non-Commissioned Member | 1,973 | 66.3 |
| | Senior Non-Commissioned Officer | 546 | 19.00 |
| | Junior Officer | 255 | 8.6 |
| | Senior Officer | 123 | 4.1 |
| Augmentee Status | Augmentee | 595 | 20.0 |
| | Non-Augmentee | 2,242 | 75.4 |
| Total Tours | 1 | 1,116 | 37.5 |
| | 2 | 697 | 23.4 |
| | 3 | 498 | 16.7 |
| | 4+ | 596 | 20.0 |
| Age | 17–21 | 63 | 2.1 |
| | 22–26 | 506 | 17.0 |
| | 27–31 | 463 | 15.6 |
| | 32–36 | 389 | 13.1 |
| | 37–41 | 336 | 11.3 |
| | 42–46 | 222 | 7.5 |
| | 47+ | 85 | 2.9 |
| Education | Some High School | 154 | 5.2 |
| | High School | 943 | 31.7 |
| | Some University/College | 548 | 18.4 |
| | University/College Degree or above | 425 | 14.3 |
| Gender | Male | 2,634 | 88.6 |
| | Female | 286 | 9.6 |
| First Language | Anglophone | 2,588 | 87.0 |
| | Francophone | 338 | 11.4 |
| Marital Status | Single | 1,151 | 38.7 |
| | Married | 1,774 | 59.7 |
| Children | 0 | 1,570 | 52.8 |
| | 1 | 486 | 16.3 |
| | 2 | 556 | 18.7 |
| | 3+ | 285 | 9.6 |

*Note*: Numbers and percentages are rounded. Variables for which the categories do not add up to 100 % have missing values, which have not been included in this table due to space limitations
*Note*: Junior Non-Commissioned Member includes the ranks of Private, Corporal and Master Corporal. Senior Non-Commissioned Officer includes Sergeant, Warrant Officer, Master Warrant Officer, and Chief Warrant Officer. Junior Officer includes Second Lieutenant, Lieutenant, and Captain. Senior Officer includes Major, Lieutenant-Colonel, Colonel, and General

## Post-Deployment Reintegration Scale Norms

To assist in interpreting scores from the PDRS, we created norms for the Canadian Forces as a whole, as well as specific subgroups within the CF (Fikretoglu & McCreary, 2010). The CF norms are presented in Table 10.5. It is important to note

**Table 10.3** Descriptive statistics for each post-deployment reintegration scale subscale and mean differences within each domain (N = 2,974)

| PDRS | Mean | SD | Skewness | Kurtosis | t-Test between positive and negative scales within domains | Effect size (Cohen's d) |
|---|---|---|---|---|---|---|
| *Work Negative* | 2.80 | 1.08 | 0.22 | −0.87 | $t(2973) = -28.88^{***}$ | −0.76 |
| *Work Positive* | 3.51 | .76 | −0.38 | −0.22 | | |
| *Family Negative* | 2.01 | .94 | 0.93 | 0.19 | $t(2973) = -46.24^{***}$ | −1.18 |
| *Family Positive* | 3.15 | .99 | −0.28 | −0.62 | | |
| *Personal Negative* | 1.83 | .82 | 1.06 | 0.48 | $t(2973) = -90.43^{***}$ | −1.80 |
| *Personal Positive* | 3.40 | .92 | −0.48 | −0.26 | | |

$^{***}p < .001$

*Note*: Skewness values of less than three and kurtosis values of less than ten are not considered serious enough departures from univariate normality to warrant further attention (Kline, 2010). Effect sizes can be categorized into the following groups: close to zero (<0.10), small (0.11–0.35), moderate (0.36–0.65) large (0.65–1.00) or very large (> 1.00) (Hyde, 2005)

**Table 10.4** Correlations among post-deployment reintegration scale subscales (N = 2,974)

| | WN | WP | FN | FP | PN | PP |
|---|---|---|---|---|---|---|
| *Work Negative* (*WN*) | (.85) | | | | | |
| *Work Positive* (*WP*) | −.05 | (.74) | | | | |
| *Family Negative* (*FN*) | .47 | −.09 | (.88) | | | |
| *Family Positive* (*FP*) | −.01 (*ns*) | .42 | .03 (*ns*) | (.89) | | |
| *Personal Negative* (*PN*) | .49 | .05 | .67 | .14 | (.86) | |
| *Personal Positive* (*PP*) | .09 | .55 | .12 | .56 | .25 | (.84) |

*Note*: All correlations are significant at p < .01 unless indicated above. Numbers in parentheses are reliability coefficients for each scale

**Table 10.5** Norms for the full CF sample

| | Mean (SD) | 95% CI | Much below average | Below average | Average | Above average | Much above average |
|---|---|---|---|---|---|---|---|
| WN | 2.79 (1.08) | 2.76–2.84 | NA | 1.00–1.70 | 1.71–3.87 | 3.88–4.95 | 4.96–5.00 |
| WP | 3.51 (.76) | 3.48–3.53 | 1.23–1.98 | 1.99–2.74 | 2.75–4.27 | 4.28–5.00 | NA |
| FN | 2.01 (.94) | 1.98–2.04 | NA | 1.00–1.06 | 1.07–2.95 | 2.96–3.89 | 3.90–4.83 |
| FP | 3.15 (.99) | 3.11–3.18 | 1.00–1.16 | 1.17–2.15 | 2.16–4.14 | 4.15–5.00 | NA |
| PN | 1.83 (.82) | 1.80–1.86 | NA | NA | 1.01–2.65 | 2.66–3.47 | 3.48–4.29 |
| PP | 3.40 (.92) | 3.37–3.44 | 1.00–1.55 | 1.56–2.47 | 2.48–4.32 | 4.33–5.00 | NA |

*Note*: N = 2,974, *SD* Standard Deviation, *CI* Confidence Interval, *WN* Work Negative, *WP* Work Positive, *FN* Family Negative, *FP* Family Positive, *PN* Personal Negative, *PP* Personal Positive

that, unlike many clinical scales, the PDRS was neither designed nor validated to be used in a diagnostic manner. As such, these norms were developed to be used as comparison points for group-level means only. Thus, we recommend against comparing an individual's scores to the norms as a way of determining whether that

individual is reintegrating at, above, or below average. Instead, the PDRS could be used alongside other information, such as interviews, focus groups, and other surveys, to determine whether a group (such as individuals from a particular tour) is experiencing more or fewer reintegration difficulties than experienced by previous tours (Fikretoglu & McCreary, 2010).

## Post-Deployment Reintegration in CF Single Service Members

Military members, as a group, embody a wide variety of intersecting demographic characteristics. They vary, for example, as a function of their age, gender, racial or ethnic background, and education level. One demographic group that military researchers seldom focus on is the single service member. That is, while it is true that many researchers commonly ask research participants about their marital status, it is rare that researchers focus on the unique aspects of single service members themselves. This is surprising since their numbers are not trivial. For example, in our large PDRS norms sample, single service members represent 39 % of respondents. What little there is known about single service members shows that they are more likely to engage in a wider array of unhealthy behaviors, including excessive alcohol use and smoking (Bray, Spira, & Lane, 2011; Jones & Fear, 2011).

When people do mention the concept of single service members, the assumption tends to be that they are all young, single, never-married, and without children. But not all single service members fall into this category. Some single service members have children, while others do not. Those with children may be single parents, or they may share custody. Furthermore, some single service members may also be responsible for taking care of their aging parents. An additional issue is that single service members with dependents (be they children or aging parents) may be older, and consequently possess more life experience, than members without dependents. Thus, it is evident that there are many different types of single service member (in the same way that there is heterogeneity among married service members), and that their post-deployment reintegration experiences and perceptions may be different depending on both the member's marital status and family responsibilities.

Typical studies, including our own, rarely ask about the more complex living arrangements that all service members may face, such as shared child custody and time spent looking after aging or ill parents. However, in our large sample of CF members, we do know that 22 % were single and that 74 % of single service members did not have a dependent (which was the terminology used in the survey demographics section). Single members without dependents had a median age between 27 and 31 years, while those with dependents had a median age between 32 and 36 years. In contrast, among married service members (including common-law), only 30 % had no dependents. Those without dependents were, on average, between 27 and 31 year of age; those with dependents were, on average, between 32 and 36 years old.

With this notion of the diversity of single service members in mind, we approached our large CF dataset with the following empirical question: do single

**Table 10.6** Comparing mean scores on four PDRS subscales based on relationship and family status

|  | WN | | WP | | FN | | FP | |
|---|---|---|---|---|---|---|---|---|
|  | M | SD | M | SD | M | SD | M | SD |
| Single | | | | | | | | |
| No dependents (N = 983) | 2.96 | *1.08* | 3.58 | *.75* | 1.85 | *.86* | 2.80 | *1.01* |
| Dependents (N = 150) | 2.77 | *1.13* | 3.44 | *.81* | 2.37 | *1.11* | 3.21 | *1.00* |
| Married | | | | | | | | |
| No dependents (N = 584) | 2.83 | *1.05* | 3.57 | *.74* | 1.98 | *.91* | 3.20 | *.90* |
| Dependents (N = 1,175) | 2.63 | *1.05* | 3.44 | *.76* | 2.11 | *.97* | 3.41 | *.90* |

*Note*: Data from the Positive Personal and Negative Personal subscales are not included here since none of the regressions were statistically significant; *WN* Work Negative, *WP* Work Positive, *FN* Family Negative, *FP* Family Positive. Values for the Personal Negative and Personal Positive scales are not shown because there were no statistically significant effects for this dimension

service members (with and without dependents) differ from similar married service members on their PDRS scores? To this end, we examined the role of marital status (single vs. married), the presence of dependents (none vs. one or more), and the interaction between to two, using multiple regression.

We conducted six hierarchical multiple regression analyses, one for each PDRS subscale score. In those analyses, the PDRS subscale scores were the dependent variables. We entered the independent variables in two steps. In Step 1, we entered age (centered at its grand mean) as a covariate because both single and married service members without dependents appeared to be younger than service members with dependents, as well as two dummy-coded variables representing marital status (1 = married, 0 = single) and dependents (1 = yes, 0 = no). In Step 2, we added the interaction between marital status and dependents to the Step 1 model. In line with Aiken and West (1991), and because we did not have strong theoretical expectations of interactions, we followed a step-down procedure: In the presence of a non-significant interaction, we interpreted the results associated with the Step 1 model only. Means and standard deviations are shown in Table 10.6. The results of the regression analyses are shown in Table 10.7.

While we will not focus extensively on the results associated with respondents' age, it is important to note that we did find significant main effects for Age at Step 1 in five of the six analyses. That is, after controlling for both Marital Status and the presence or absence of Dependents, older individuals reported lower levels of both positive and negative post-deployment reintegration perceptions and experiences in all PDRS domains except the Personal Positive. The magnitude of the association between Age and PDRS scores, as measured by Beta coefficients, ranged from $-.07$ to $-.23$. The strongest associations were with the Work Negative (Beta = $-.23$) and Work Positive (Beta = $-.12$) subscales.

Together, the main effects of Age, Marital Status, and Dependents accounted for about 6 % of the variance in Work Negative scores, $F(3, 2036) = 43.36$, $MSE = 1.13$, $p < .001$. However, neither Marital Status nor Dependents were significant predictors of negative work reintegration. The main effects of Age, Marital Status, and

**Table 10.7** Summary of hierarchical regression analyses predicting PDRS scores

| | PDRS score | | | | | | | |
| | WN | | WP | | FN | | FP | |
| Predictor | ΔR² | B(SE) | ΔR² | B(SE) | ΔR² | B(SE) | ΔR² | B(SE) |
|---|---|---|---|---|---|---|---|---|
| Step 1 | .060* | | .022* | | .022* | | .086* | |
| Age | | 0.16 (0.02)* | | -0.06 (0.01)* | | -0.06 (0.02)* | | -0.04 (0.02)* |
| Marital status (MS) | | -0.01 (0.06) | | 0.04 (0.04) | | 0.06 (0.05) | | 0.44 (0.05)* |
| Dependents (D) | | -0.08 (0.06) | | -0.10 (0.04)* | | 0.26 (0.05)* | | 0.27 (0.05)* |
| Step 2 | .000 | | .000 | | .008* | | .001 | |
| Age | | -0.16 (0.02)* | | -0.06 (0.01)* | | -0.07 (0.02)* | | -0.04 (0.02)* |
| Marital status (MS) | | 0.02 (0.07) | | 0.04 (0.05) | | 0.18 (0.06)* | | 0.48 (0.06)* |
| Dependents (D) | | -0.02 (0.11) | | -0.13 (0.08) | | 0.62 (0.10)* | | 0.40 (0.10)* |
| MS × D | | -0.09 (0.13) | | 0.04 (0.09) | | -0.47 (0.11)* | | -0.17 (0.12) |
| Total R² | .060* | | .022* | | .030* | | .089* | |

*p < .05

*Note: WN* Work Negative, *WP* Work Positive, *FN* Family Negative, *FP* Family Positive. Except for Age, none of the predictors were significantly associated with the Personal Negative and Positive scores, so we did not include these results in the table
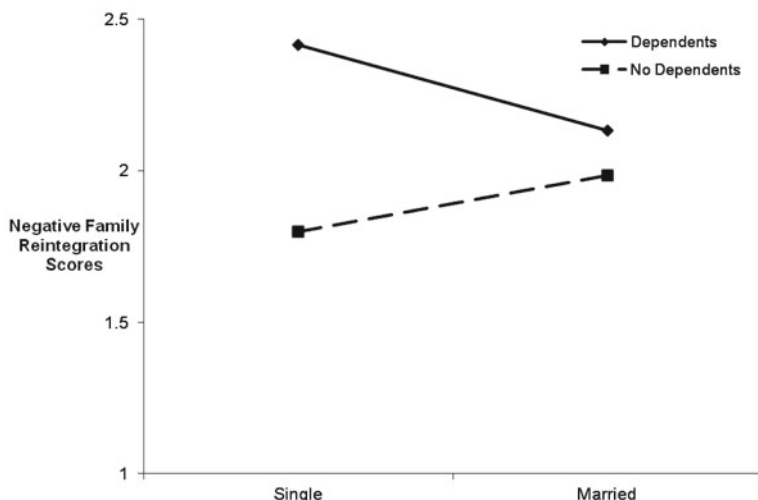
**Fig. 10.1** Interaction between marital status and dependents when predicting family negative scores from the post-deployment reintegration scale

Dependents together explained about 2 % of the variance in Work Positive scores, $F(3, 2036) = 15.27$, $MSE = 0.57$, $p < .001$. Having dependents was associated with significantly lower Work Positive scores, $B = -0.10$, $SE = 0.04$, $\beta = -.07$, $t(2036) = -2.43$, $p = .02$, 95 % CI $[-.18, -.02]$.

Jointly, the main effects of Age, Marital Status, and Dependents accounted for about 0.5 % of the variance in Personal Negative scores, $F(3, 2036) = 3.19$, $MSE = 0.66$, $p = .02$. However, neither Marital Status nor Dependents were significant predictors of negative personal reintegration. The main effects of Age, Marital Status, and Dependents together explained about 0.2 % of the variance in positive personal reintegration, $F(3, 2036) = 1.37$, $MSE = 0.83$, $p = .25$. None of the predictors had a significant predictive association with scores on the Personal Positive scale.

The interaction between Marital Status and Dependents was a significant predictor of negative family reintegration, $B = -0.47$, $SE = 0.11$, $t(2035) = -4.12$, $p < .001$, 95 % CI $[-.69, -.25]$. At Step 2, the model accounted for about 3 % of the variance in Family Negative scores, up from about 2 % at Step 1, $F(4, 2035) = 15.94$, $MSE = 0.87$, $p < .001$, $F(3, 2036) = 15.48$, $MSE = 0.88$, $p < .001$, and $\Delta F(1, 2035) = 16.95$, $p < .001$. An investigation of the simple slopes revealed that, for married participants, whether or not they had dependents did not have a significant effect on their negative family scores, $B = 0.15$, $SE = 0.06$, $t(2035) = 2.56$, $p = .06$. However, for single participants, having dependents resulted in significantly higher scores on the Family Negative scale than not having dependents, $B = 0.61$, $SE = 0.10$, $t(2035) = 6.18$, $p = .004$. Figure 10.1 displays the interaction.

The main effects of Age, Marital Status, and Dependents together explained about 9 % of the variance in Family Positive, $F(3, 2036) = 63.80$, $MSE = 0.89$,

$p < .001$. Having dependents or being married was associated with significantly higher Family Positive scores, respectively, $B = 0.27$, $SE = 0.05$, $\beta = .14$, $t(2036) = 5.25$, $p < .001$, 95 % CI [.17, .37] and $B = 0.44$, $SE = 0.05$, $\beta = .22$, $t(2036) = 8.62$, $p < .001$, 95 % CI [.34, .54].

These findings suggest that being a single service member or having dependents rarely influences post-deployment reintegration-related experiences and perceptions. The one area, however, where these two demographic variables seemed to be associated with poorer reintegration was in the family domain. Being married or having dependents had significant main effects on the positive family scores, each uniquely predicting higher levels of Family Positive scores on the PDRS. For the Family Negative scores, marital status and having dependents interacted, such that, for married individuals, whether or not they had dependents did not have a significant impact on their scores, whereas, for single individuals, having dependents translated into significantly higher scores than not having dependents. This suggests there may be stressors associated with being single with dependents that increase the risk for having difficulty adjusting in the family domain (e.g., Drummet, Coleman, & Cable, 2003). However, given that the overall effect sizes were relatively low and the sample size large, there is the possibility that these effects are methodological artifacts.

## Summary

Our aim with this chapter has been to convey the importance of post-deployment reintegration by noting that very little research has focused on the stressors and non-clinical strains of the post-deployment period itself. To address this research gap, we developed a model that focused on people's positive and negative experiences and perceptions in three general areas where the post-deployment reintegration process is most salient: at work, within the family, and within one's personal and world views. Next we developed a way to effectively measure the positive and negative aspects of the work, family, and personal aspects of post-deployment reintegration. Finally, we focused on: (1) new developments with our post-deployment reintegration measure (e.g., the relationships between scales and developing norms so that users would have a way of effectively interpreting findings from it); and (2) describing the ways in which single service members (with and without dependents) differed from married service members (also with and without dependents) on the PDRS.

Research on post-deployment reintegration has important implications for both service members and the clinicians or practitioners who work with them through difficult times. Important for both of these groups is our focus on the positive, as well as the negative, aspects of post-deployment reintegration. As psychological researchers, we often focus on the negative aspects of people's lives, in order to identify ways in which to improve people's quality of life. But as the positive psychology movement has shown, we have done this to the detriment of identifying people's strengths and the ways in which they often thrive in difficult situations (Seligman &

Csikszentmihalyi, 2000). An overly negative focus in military psychology research may lead service members to over-estimate their likelihood of developing psychological disorders such as post-traumatic stress disorder or depression. It may also lead them to focus solely on the negative, as opposed to the positive, aspects associated with post-deployment reintegration. It also ignores the clinical wisdom that we can use or build upon people's existing strengths to address their weaknesses. For example, if someone is doing well in the family domain, but is struggling in the work domain, it might be beneficial for the practitioner to get them to think about how their interpersonal strengths that served them well in the family domain can be applied in the work domain. Thus, including both positive and negative aspects of reintegration in our model reminds both service members and clinicians of the importance of balancing the negative with the positive.

Another implication for practitioners is that, while there are general trends in post-deployment reintegration, there also are subgroup differences. Our examination of the role that marital status and having dependents have on post-deployment reintegration shows that, overall, single and married service members tend to be very similar on their self-reported PDRS experiences and perceptions. However, whereas the process was similar for married service members with or without dependents, single service members with dependents reported more Family Negative experiences than their counterparts without dependents (even after controlling for age). As such, it is important to note that single parent families may be an at-risk group within military settings. Whether the seemingly higher levels of negative family reintegration experiences and perceptions for this group are due to pre-existing vulnerability factors (single parents may be less educated and may come from disadvantaged SES backgrounds; Ambert, 2006), the added stressors of single parenthood, a confound related to the high statistical power in our sample, or some combination of all three, is one important target for future research, as findings would help to address questions around both the nature and the timing of interventions to support these individuals.

While we have learned a lot, there is still so much more that needs to be understood about the post-deployment reintegration period. One of the main issues, in our minds anyway, has to do with the process itself. More specifically, we are cognizant of the fact that our research typically captured people at approximately the 6 month point of the post-deployment reintegration stage. Part of the reason for this is that we used the CF Human Dimensions of Operations survey as a vehicle for getting the large sample sizes we needed for development and validation purposes. A second reason for wanting this timeframe was that previous work by Thompson and Gignac (2002) suggested that it may take people 4 or more months to fully adapt to being home again. However, we are aware that people may respond differently at different time points in the reintegration process. For example, Adler, Britt, Castro, McGurk, and Bliese (2011) noted that anger and alienation were the key themes that emerged from their interviews with U.S. service members who had been home from deployment for only a week. Similarly, one of our smaller studies reassessed a small group of people again at approximately 11 months post-deployment, where we noted that there were really no apparent differences in PDRS scores from Time 1 to Time 2.

Thus, in conclusion, the following question needs to be asked: what factors influence the post-deployment reintegration process? Based on the findings we presented here, as well as in Blais et al. (2009), it would appear that combat-related stressors are not strongly associated with PDRS scores. However, post-traumatic stress disorder symptoms are more highly correlated with PDRS scores, so perhaps traumatic experiences on deployment are indirectly related with some aspects of the post-deployment reintegration experience. But what about the various social contexts in which returning service members find themselves (e.g., Reservists who return to a civilian job)? How do these influence the post-deployment reintegration process? What roles do factors such as peer support, leadership, and work-life balance (just to name a few) play in enhancing or detracting from the reintegration experience? How do other individual differences influence this process (e.g., men vs. women, enlisted vs. officer)? Do these factors influence the different reintegration domains equally or do some influence some domains more than others? All of these questions, and more, will provide service members and health care practitioners a better understanding of the complex nature of the post-deployment reintegration period.

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