

Experiences and career intentions of combat-deployed UK military personnel

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Background	Most studies of the psychological impact of military deployment focus on the negative and traumatic aspects. Less is known about the full range of deployment experiences nor how these may impact on career intentions.
Aims	To examine subjective operational experiences and career intentions in deployed UK military personnel using data gathered toward the end of an operational deployment.
Methods	Data were gathered during deployment in Iraq and Afghanistan. A self-report survey collected data on sociodemographic, operational and military factors. Respondents provided their strength of agreement or disagreement with six potentially positive deployment experiences and their endorsement or rejection of six possible career intentions. Two mental health measures assessed symptoms of common mental disorder and post-traumatic stress disorder.
Results	Responses were 681 in Iran 2009 (100% response rate); 1421 in Afghanistan in 2010 (100%), 1362 in 2011 (96%) and 860 in 2015 (91%). Five of the potentially positive outcomes were endorsed by >50% of the sample: confidence about remaining healthy after returning home, pride in accomplishments, increased confidence in abilities, improved unit cohesion and experiencing a positive life effect. Ninety per cent of respondents planned to continue in service after returning home. Fewer positive deployment experiences, poorer mental health, lesser unit cohesion and more negative impressions of leadership were significantly associated with intention to leave service.
Conclusions	Contrary to the popular belief that UK military personnel deployed to Iraq or Afghanistan experience negative outcomes, this paper shows that deployment can be a positive experience for a substantial majority of deployed personnel.
Key words	Career intentions; deployment; military; positive experiences.

Introduction

The UK Armed Forces (UKAF) undertook deployment in Afghanistan from 2002 to 2015 and in Iraq from 2003 to 2011. UKAF personnel typically deploy to such challenging environments for periods of ~6–7 months, often undertaking humanitarian support, peacekeeping or combat operations. All UKAF personnel enter service voluntarily; there is no compulsion to join; however, deployment is a routine component of military service. There is likely to be no single or predictable psychological impact of deployment; for some it may be one of the best times of their lives, for others the worst.

The popular narrative of military mental health and deployment experiences during the two medium-scale

operations in Iraq and Afghanistan frequently characterized many aspects of deployment in negative terms, often focusing upon physical or psychological injury [1]. Indeed, the majority of a sample of the UK general public believed that, for most military personnel, service was associated with physical, mental or emotional damage [2]. Empirical research does not support this view. Our research conducted during the early period of the Iraq deployment suggested that the mental health of UK military personnel was generally robust and that there was no significant difference in the level of mental ill-health between regular forces personnel deployed to Iraq in 2003 and those who did not deploy [3]. Overall mental health and deployment effects were similar when the study was repeated 5 years later, this time including

personnel deployed to Iraq and/or Afghanistan. Although there were no significant differences in the mental health of regular deployers and those who had not deployed, certain groups within the overall force were at higher risk, particularly reserves and those with direct combat experience [4]. Despite the publication of these findings, the negative narrative relating to military service and deployment in particular persists.

Most attention, including both research and public perception, has therefore been focused on the negative psychological impact of deployment; however, very little has been said about any possible positive impact of deployment. Likewise, very little research has been conducted exploring the career impact of deployment; does deployment increase or decrease the chance of someone wishing to remain in service? It is notable that the majority of the deployment literature uses data gathered after military personnel return home, which may be subject to recall bias.

In this paper, we provide data gathered during an operational deployment and not after. We looked at subjective responses to the ongoing deployment, both positive and negative. Our second aim was to assess whether deployment experiences were associated with intention to stay or leave the military after returning home.

Methods

We examined data gathered from between 15 and 20% of the deployed force during four periods of deployment: Iraq in 2009 and Afghanistan in 2010, 2011 and 2015. Surveys were administered to personnel working in their

deployment location. Survey locations included relatively safe main bases and smaller, isolated, austere unit locations in dangerous areas. All three services were included in the survey, Royal Navy including Royal Marines, Army, and Royal Air Force. The content of the survey has been described in full elsewhere [5] and survey data have been used to investigate mild traumatic brain injury [6], perceptions of family support [7], leadership and cohesion [8].

The self-report survey asked questions about sociodemographics (age, sex, rank, combat role etc.), military factors (impressions of leadership, unit cohesion and time spent in a hostile area) and operational experiences (such as life-threatening situations and aspects of combat).

Mental health status was assessed using two main measures; the 12-item General Health Questionnaire (GHQ-12) [9] and the Post-Traumatic Stress Disorder (PTSD) Checklist Civilian version (PCL-C) [10]. Cut-off scores of ≥ 4 on the GHQ-12 and scores of ≥ 50 on the PCL-C indicated possible caseness. Mental health-related stigmatization was assessed using a 13-item scale modified from a US version to accommodate differences with UK forces [11].

Two dependent variables were assessed: firstly, respondents were asked about their strength of agreement or disagreement with potential deployment experiences and secondly, whether they endorsed six possible career intentions (shown in Table 1). For the six deployment outcomes, strongly agree and agree responses were combined, as were strongly disagree and disagree responses to produce binary categories; a count variable

Table 1. Deployment effects and career intentions

Deployment outcomes				
Please indicate how much you DISAGREE or AGREE with the following statements about THIS DEPLOYMENT so far (<i>n</i>):	Strongly disagree, <i>n</i> (%)	Disagree, <i>n</i> (%)	Agree, <i>n</i> (%)	Strongly agree, <i>n</i> (%)
I am confident that I will return home healthy after this deployment (4099)	149 (4)	435 (11)	2411 (59)	1104 (27)
I feel pride from my accomplishments during this deployment (4129)	336 (8)	767 (19)	2289 (55)	737 (18)
This deployment has made me more confident in my abilities (4134)	249 (6)	947 (23)	2286 (55)	652 (16)
This deployment improved cohesion in my unit (4071)	373 (9)	1176 (29)	2173 (53)	349 (9)
It has had a positive effect on my life (4138)	519 (13)	1354 (32)	1898 (46)	367 (9)
I deal with stress better because of this deployment (4116)	451 (11)	1909 (46)	1600 (39)	156 (4)
Career intentions				
Outcome	<i>n</i> (%)			
I plan to stay in for as long as possible or until retirement	1737 (42)			
I plan to extend my present term of service but not necessarily until retirement	1065 (26)			
I plan to leave on completion of my current term of service	862 (21)			
I have already handed in my notice to leave	80 (2)			
I am going to hand in my notice to leave in the very near future	336 (8)			
I have recently withdrawn my notice	14 (1)			

Numbers and percentages may not sum to sample total due to missing data.

was then calculated. Tertiles were generated to represent low (zero to three endorsements), medium (four to five endorsements) and high levels of endorsement (six endorsements). Medium and high categories were combined to represent high levels of 'positive' experiences (four to six responses) and three or less endorsements denoted lower levels of positive experiences. The career intention responses were each categorized as 'stay' or 'leave' to indicate whether a study respondent had decided to remain within or to exit the UKAF when they returned from deployment.

All analyses were conducted in the Statistical Package for Social Sciences (SPSS) version 21 for Windows (IBM Corp., Armonk, NY). Statistical significance was $p < 0.05$. Frequency tables were generated for the itemized career intention and deployment experience variables. Unadjusted and adjusted logistic regression analyses were used to generate odds ratios with 95% confidence intervals. Career intentions and deployment experiences were entered as outcome variables and each of the variables identified as significant when screened using chi-squared tests were entered as explanatory variables. Potential confounding variables were entered in blocks representing sociodemographic and military factors, operational factors, mental health and finally all factors were entered in a single block.

The study protocol was approved by the Ministry of Defence Research Ethics Committee (Ethics protocol 0839/194).

Results

The number of responses from Iraq in 2009 were 681 (100% response rate) and from Afghanistan, 1421 in 2010 (100% response rate), 1362 in 2011 (96%) and 860 in 2015 (91%). Five of the six positive deployment experiences were endorsed by the majority of respondents; only 'I deal with stress better as a result of deploying' fell to <50%. Of the study respondents, 90% planned to stay in the military as long as possible, to extend their current term of service, had withdrawn their notice to leave at the time of survey completion or intended to complete their current term of service. Ten per cent intended to leave in the very near future or had tendered their notice to leave (Table 1).

A range of independent variables were screened using univariable analyses to determine whether they were significantly associated with the two outcomes of interest. The primary outcome; positive experiences of deployment was significantly associated with operational area (Iraq or Afghanistan), age, rank, combat role, time spent in the military, previous deployment episode, probable PTSD or common mental disorder (CMD) symptoms, mental health-related stigmatization, fears of impending death or injury, leadership behaviour and perceived unit cohesion (all $P < 0.001$). Cumulative deployment length was also

significantly associated ($P < 0.01$). Having a partner in the military, a deployed partner, location in the operational area and time spent deployed were not significantly associated with the deployment experience outcome (Table 2). Secondly, career intentions were significantly associated with operational area (Iraq or Afghanistan), rank, combat role, substantial PTSD or CMD symptoms, mental health-related stigmatization, fears of impending death or injury, leadership behaviour and perceived unit cohesion (all $P < 0.001$). Significant associations were also found for age, time spent deployed and location in the operational area (all $P < 0.05$). Conversely, having a partner in the military, a deployed partner, previous deployment episode, cumulative deployment length and time spent in the military were not significantly associated with the career intention outcome (Table 3).

When adjusted for potential sociodemographic, operational and military confounders, endorsing a greater number of positive deployment effects was significantly associated with serving in Afghanistan rather than Iraq, age younger than 24 years, military service length <4 years, less than two previous operational deployments, more frequent perceptions of impending death or serious injury, having caseness levels of CMD symptoms, reporting lower levels of mental health stigmatization, greater levels of perceived positive leader behaviours and higher levels of perceived unit cohesion. Although there was an association between rank and deployment outcome, this was not significant when adjusted for sociodemographic and operational factors; the latter notwithstanding, senior ranks were less likely to report high levels of positive deployment effects than juniors while officers were more likely to do so. Personnel with greater cumulative deployment time within a 3-year timeframe were less likely to report positive deployment outcomes although this was not significant when adjusted for sociodemographic factors (Table 2).

In logistic regression analyses, when adjusted for potential sociodemographic, operational and military factors, intending to leave military service was significantly related to serving in Afghanistan rather than Iraq, junior rank, more frequent perceptions of impending death or serious injury, having caseness levels of CMD symptoms, fewer perceived positive leader behaviours and lower levels of perceived unit cohesion. Before adjustment for all potential confounders, PTSD symptoms were significantly associated with intention to leave service; following adjustment, the association became borderline non-significant. Younger age was significantly associated with intention to leave service but was borderline non-significant when adjusted for sociodemographic factors (Table 3).

Discussion

This study found that of six potentially positive deployment experiences, five were endorsed by more than half

Table 2. Military, operational, mental health factors and ORs for higher and lower levels of positive deployment outcomes

Factor, n (%)	Positive deployment effect, n (%)		OR (95% CI)	AOR (95% CI) ^a	AOR (95% CI) ^b	AOR (95% CI) ^c	AOR (95% CI) ^d
	0–3 effects endorsed	4–6 effects endorsed					
Iraq	337 (57)	256 (43)	1	1	1	1	1
Afghanistan	1331 (37)	2250 (63)	2.23 (1.87–2.65)***	2.07 (1.71–2.50)***	1.94 (1.59–2.36)***	2.13 (1.77–2.58)***	1.68 (1.35–2.10)***
Age ≤ 24 years	804 (36)	1423 (64)	1	1	1	1	1
Age ≥ 24 years	863 (44)	1083 (56)	0.71 (0.63–0.80)***	0.82 (0.72–0.95)**	0.68 (0.60–0.78)***	0.69 (0.60–0.78)***	0.82 (0.70–0.96)**
Junior rank	1167 (39)	1836 (61)	1	1	1	1	1
Senior rank	325 (50)	321 (50)	0.63 (0.53–0.75)***	0.87 (0.72–1.05)	0.56 (0.47–0.67)***	0.57 (0.47–0.68)***	0.73 (0.59–0.90)**
Commissioned officer	31 (6)	346 (94)	1.28 (1.05–1.56)*	1.53 (1.24–1.90)***	1.11 (0.90–1.36)	1.26 (1.02–1.56)*	1.38 (1.09–1.75)**
Combat arm or role	676 (37)	1142 (67)	1	1	1	1	1
All other arms or role	742 (43)	968 (57)	0.77 (0.68–0.88)***	0.94 (0.65–1.35)	0.85 (0.73–1.00)*	0.76 (0.66–0.88)	1.09 (0.72–1.63)
Service length ≤ 3 years	467 (31)	1043 (69)	1	1	1	1	1
Service length ≥ 4 years	1100 (46)	1305 (54)	0.53 (0.46–0.61)***	0.75 (0.63–0.90)**	0.51 (0.44–0.58)***	0.47 (0.41–0.55)***	0.65 (0.54–0.80)***
0 or 1 previous tour	654 (31)	1493 (70)	1	1	1	1	1
≥ 2 previous tours	1009 (50)	1012 (50)	0.44 (0.39–0.50)***	0.44 (0.38–0.50)***	0.43 (0.37–0.49)***	0.40 (0.35–0.46)***	0.40 (0.35–0.47)***
0–12 months deployed in the last 3 years	428 (37)	725 (63)	1	1	1	1	1
> 12 months deployed in the last 3 years	49 (53)	44 (47)	0.53 (0.35–0.81)**	0.68 (0.44–1.06)	0.54 (0.35–0.83)**	0.50 (0.32–0.78)**	0.40 (0.35–0.47)***
In danger of being injured or killed—never	819 (44)	1051 (56)	1	1	1	1	1
Once or twice	370 (37)	629 (63)	1.33 (1.13–1.55)***	1.27 (1.08–1.50)**	1.44 (1.22–1.70)***	1.43 (1.21–170)***	1.45 (1.20–1.74)***
Sometimes to many times	467 (36)	819 (64)	1.37 (1.18–1.58)***	1.33 (1.13–1.58)**	1.49 (1.27–1.74)***	1.61 (1.37–1.89)***	1.64 (1.35–1.98)***
PTSD symptoms (score ≤ 49 on the PCL-C)	1598 (40)	2465 (61)	1	1	1	1	1
PTSD symptoms (score ≥ 50 on the PCL-C)	62 (70)	27 (30)	0.28 (0.18–0.45)***	0.25 (0.16–0.40)***	0.28 (0.18–0.45)***	0.67 (0.40–1.13)	0.58 (0.34–1.02)
CMD (GHQ-12 ≤ 3 symptoms)	1190 (34)	2265 (66)	1	1	1	1	1
CMD (GHQ-12 ≥ 4 symptoms)	469 (68)	225 (33)	0.25 (0.21–0.30)***	0.23 (0.20–0.28)***	0.27 (0.22–0.32)***	0.30 (0.25–0.36)***	0.30–0.24–0.36)***
≤ 2 mental health stigmatization or barriers to care items	704 (34)	1378 (66)	1	1	1	1	1
≥ 3 mental health stigmatization or barriers to care items	876 (47)	992 (53)	0.56 (0.51–0.66)***	0.55 (0.48–0.63)***	0.60 (0.53–0.69)***	0.70 (0.61–0.80)***	0.70 (0.61–0.81)***
Endorsed 0–2 positive leadership behaviours	750 (51)	727 (49)	1	1	1	1	1
Endorsed 3–4 positive leadership behaviours	904 (34)	1763 (66)	2.01 (1.77–2.29)***	2.04 (1.77–2.34)***	2.04 (1.79–2.33)***	1.67 (1.45–1.92)***	1.65 (1.42–1.93)***
Endorsed 0–2 cohesion factors	744 (60)	493 (40)	1	1	1	1	1
Endorsed 3–4 positive cohesion factors	917 (31)	2002 (69)	3.30 (2.87–3.78)***	3.39 (2.93–3.92)***	3.01 (2.60–3.48)***	2.66 (2.29–3.09)***	2.55 (2.16–3.01)***

AOR, adjusted odds ratio; CI, confidence interval; OR, odds ratio.

^aAdjusted for sociodemographic and military factors: rank, sex, age, combat arm, previous operational tours.

^bAdjusted for operational factors: location in theatre, length of deployment, perceptions of impending death or serious injury.

^cAdjusted for mental health factors: PTSD symptoms, CMD symptoms, perceived global health, mental health stigmatization and perceived barriers to care.

^dAdjusted for all factors.

* $P < 0.05$.

** $P < 0.01$.

*** $P < 0.001$.

All significant values are shown in bold type.

of deployed personnel. These were confidence about remaining healthy after returning home, pride in accomplishments, increased confidence in abilities, improved unit cohesion and experiencing a positive life effect and all of these were endorsed by at least 70% of personnel. Only 'being able to deal with stress better' was endorsed at a lower level (43%). Ninety per cent of respondents planned to continue their military service following deployment. This proportion is in keeping with the annual outflow from the UKAF, which is ~10% [12].

The strengths of this study include the large sample size, multiple time samples and consistently high response rates. We used validated mental health measures employed in past military studies. One weakness is the inability to examine causation due to the cross-sectional nature of the data. Furthermore, we used forced-choice scales for both deployment experiences and career intentions. There are only a limited number of mechanisms of exit from the UK military; however, the positive deployment outcomes were derived from preliminary focus

Table 3. Military, operational, mental health factors and ORs for intending to leave or remain in military service

Factor, <i>n</i> (%)	Career intention, <i>n</i> (%)		OR (95% CI)	AOR (95% CI) ^a	AOR (95% CI) ^b	AOR (95% CI) ^c	AOR (95% CI) ^d
	Stay	Leave					
0–3 positive deployment effects endorsed	1377 (85)	250 (15)	1	1	1	1	1
4–6 positive deployment effects endorsed	2279 (94)	164 (7)	0.40 (0.32–0.49)***	0.38 (0.30–0.47)***	0.40 (0.32–0.50)***	0.45 (0.36–0.56)***	0.42 (0.33–0.54)***
Iraq	568 (97)	16 (3)	1	1	1	1	1
Afghanistan	3110 (89)	400 (11)	4.57 (2.75–7.59)***	4.11 (2.46–6.85)***	4.83 (2.77–8.40)***	4.64 (2.78–7.76)***	4.59 (2.61–8.07)***
Age ≤ 24 years	1928 (89)	245 (11)	1	1	1	1	1
Age ≥ 24 years	1749 (91)	171 (9)	0.77 (0.63–0.95)*	0.81 (0.65–1.01)	0.75 (0.61–0.93)**	0.76 (0.61–0.94)*	0.76 (0.60–0.97)*
Junior rank	2585 (88)	352 (12)	1	1	1	1	1
Senior rank	606 (95)	33 (5)	0.40 (0.28–0.58)***	0.41 (0.28–0.60)***	0.48 (0.33–0.70)***	0.41 (0.28–0.60)***	0.46 (0.31–0.70)***
Commissioned officer	481 (94)	31 (6)	0.47 (0.32–0.69)***	0.50 (0.33–0.75)**	0.62 (0.42–0.91)*	0.48 (0.32–0.72)***	0.61 (0.39–0.93)*
Combat arm or role	1565 (88)	221 (12)	1	1	1	1	1
All other arms or role	1534 (91)	145 (9)	0.67 (0.54–0.84)***	1.01 (0.56–1.83)	0.87 (0.68–1.12)	0.66 (0.53–0.84)**	1.22 (0.64–2.31)
Forward deployment	1532 (88)	209 (12)	1	1	1	1	1
Rearward deployment	2133 (91)	207 (9)	0.71 (0.58–0.87)**	0.83 (0.66–1.03)	0.84 (0.68–1.04)	0.72 (0.58–0.89)*	0.89 (0.70–1.13)
0–16 weeks deployed on current tour	2101 (91)	208 (9)	1	1	1	1	1
16+ weeks deployed on current tour	1530 (88)	203 (12)	1.34 (1.09–1.64)**	1.19 (0.97–1.47)	1.13 (0.91–1.40)	1.36 (1.10–1.69)**	1.13 (0.90–1.41)
In danger of being injured or killed—never	1681 (92)	146 (8)	1	1	1	1	1
Once or twice	894 (91)	87 (9)	1.12 (0.85–1.48)	1.07 (0.81–1.43)	1.06 (0.80–1.40)	1.11 (0.83–1.48)	1.04 (0.77–1.41)
Sometimes to many times	1086 (86)	182 (14)	1.93 (1.52–2.43)***	1.61 (1.24–2.08)***	1.73 (1.36–2.22)***	1.92 (1.50–2.48)***	1.52 (1.14–2.02)**
PTSD symptoms (score ≤49 on the PCL-C)	3591 (90)	394 (10)	1	1	1	1	1
PTSD symptoms (score ≥50 on the PCL-C)	64 (75)	21 (25)	2.99 (1.81–4.95)***	2.88 (1.72–4.82)***	2.37 (1.42–3.96)***	1.76 (1.01–3.08)*	1.60 (0.90–2.84)
CMD (GHQ-12 ≤3 symptoms)	3100 (91)	291 (9)	1	1	1	1	1
CMD (GHQ-12 ≥4 symptoms)	550 (82)	125 (19)	2.42 (1.93–3.04)***	2.42 (1.91–3.06)***	2.10 (1.65–2.66)***	2.16 (1.68–2.80)***	1.98 (1.51–2.60)***
≤2 mental health stigmatization or barriers to care items	1850 (91)	179 (9)	1	1	1	1	1
≥3 mental health stigmatization or barriers to care items	1629 (89)	206 (11)	1.31 (1.06–1.61)*	1.29 (1.04–1.60)*	1.14 (0.91–1.41)	1.11 (0.89–1.38)	1.02 (0.81–1.29)
Endorsed 0–2 positive leadership behaviours	1249 (86)	197 (14)	1	1	1	1	1
Endorsed 3–4 positive leadership behaviours	2400 (92)	218 (8)	0.58 (0.47–0.71)***	0.65 (0.52–0.80)***	0.60 (0.49–0.74)***	0.67 (0.54–0.84)***	0.78 (0.62–0.98)*
Endorsed 0–2 cohesion factors	1027 (85)	187 (15)	1	1	1	1	1
Endorsed 3–4 positive cohesion factors	2634 (92)	229 (8)	0.48 (0.39–0.59)***	0.50 (0.40–0.62)***	0.54 (0.44–0.68)***	0.58 (0.46–0.73)***	0.62 (0.48–0.78)***

AOR, adjusted odds ratio; CI, confidence interval; OR, odds ratio.

^aAdjusted for sociodemographic and military factors: rank, sex, age, combat arm, previous operational tours.^bAdjusted for operational factors: location in theatre, length of deployment, leadership, perceptions of impending death or serious injury.^cAdjusted for mental health factors: PTSD symptoms, CMD symptoms, perceived global health, mental health stigmatization and perceived barriers to care.^dAdjusted for all factors.**P* < 0.05.***P* < 0.01.****P* < 0.001.

All significant values are shown in bold type.

groups and are, therefore, limited in scope. Many other positive outcomes may be available for empirical testing.

As described by Ashcroft [2], the majority of the UK civilian population believe that military service and deployment in particular carries a substantial risk of developing health problems. There is a lack of public understanding of the work of the armed forces [13] which might contribute in part to assumptions about negative deployment effects. The current study outcomes help to characterize some of the positive deployment

experiences of UK personnel. This challenges popular convictions that most deployed personnel are damaged either physically or mentally. Such beliefs might influence employer's decisions to employ veterans [14] and might in the longer term have a negative impact on military mental health and well-being [15]. Focusing solely on the real hazards and potential negative consequences of deployment, to the exclusion of any other outcomes, may risk fuelling stereotypical views of veterans, which has happened in the case of Vietnam veterans [16]. They

are often characterized as being depressed, demoralized, dangerous and drug-addicted, all of which have been portrayed in media and cinematic representations. Indeed, some suggest that this may influence self-representations of Vietnam veterans themselves [17]. In contrast, our findings suggest that operational deployment, the core activity of the UK military, is mostly viewed in a positive way by deployers themselves.

CMD symptoms, higher stigma but not PTSD were significantly associated with reporting fewer positive outcomes, although the study may be under-powered to assess PTSD associations. Good unit cohesion and leadership were significantly associated with positive deployment effects, reflecting previous findings that both factors positively influence deployment mental health [8]. Leadership is likely to have impacted younger personnel and junior ranks may have benefited from the high levels of team cohesion and good leadership found in this study.

Compared with juniors, senior ranks were significantly less likely to report positive outcomes whereas officers were significantly more likely to do so with around 90% endorsing four to six positive experiences. Why seniors should report fewer positive experiences is unclear and somewhat counter-intuitive as junior rank and younger age have both been linked to poorer deployment-related mental health [18] and adverse deployment experiences [19]. Our findings contrast with this; those who felt at risk of death or serious injury reported significantly more positive deployment experiences. Dangerous deployment may well have been regarded as a unique 'adventure' for younger people; military service has been characterized as a 'turning point in the transition to young adulthood' [20] which might explain why junior ranks and officers experienced more positive deployment experiences being mostly young, with less cumulative deployment experience. Indeed, cumulative deployment was significantly associated with reporting fewer positive deployment experiences; this has been negatively associated with psychological well-being in previous research [21]. In contrast, seniors may well have habituated to repeated 'adventurous' deployment during their military careers and they are known to benefit less from deployment-related support [22].

In contrast to Iraq, Afghanistan operations were significantly associated with more positive deployment experiences. Iraq data were collected at the end of static operations during a wind-down period where operational weariness may have been present, whereas data collection in Afghanistan occurred when operations were highly kinetic with a chance of operational success.

It is perhaps unsurprising that ~90% of deployed personnel intended to remain in military service given the level of positive deployment experience. Fewer positive experiences were associated with intentions to leave service. Such intentions were associated with lesser unit

cohesion, poorer leadership and poorer mental health. In keeping with our results, US studies similarly suggest that poorer mental health is significantly associated with leaving service [23–26]; however, greater perceived unit support is a substantial predictor of retention [27,28]. Given the cross-sectional nature of our data, intention to leave service may have simply reflected generally negative attitudes and we cannot say whether this was situational or if leaving became reality after returning home. Junior ranks reported more frequent intentions to leave service, reflecting wider research outcomes [29]. Junior ranks are required to serve a minimum of 4 years of service before leaving and our findings could simply reflect a reality for this group.

Among a large sample of deployed UK military personnel, around three quarters anticipated that they would return home healthy, confident and with pride in their accomplishments although 43% felt better able to deal with stress following deployment. Greater levels of positive experiences were associated with intentions to remain in service after returning home which were reported by 89% of respondents. Poorer mental health, lower cohesion and lesser leadership were significantly associated with intention to leave. Although limited by cross-sectional (associative) data, it may well be helpful to emphasize the positive aspects of deployment both to rebuff unfounded claims about the negative aspects of military service and to provide accurate information about military personnel's career intentions.

Key points

- Contrary to the popular narrative that deployment is a harmful or damaging experience, more than half of deployed UK personnel endorsed five out of six positive deployment experiences.
- The mostly commonly endorsed deployment experiences were confidence about remaining healthy after returning home, pride in one's accomplishments and increased confidence in one's abilities.
- Ninety per cent of respondents planned to continue in military service after returning home.

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R.M.-B. is a full-time member of the British Army currently seconded to King's College London. N.J. is a full-time reserve member of the British Army currently seconded to King's College London. B.C. is a UK Ministry of Defence employee. N.G. and S.W. are employed by King's College London which receives funding from the UK Ministry of Defence. S.W. is also honorary civilian consultant advisor in psychiatry to the British

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Competing interests

All authors declare that there is no competing interests.

References

- Richard Norton-Taylor. *The Guardian newspaper*. <https://www.theguardian.com/uk-news/2014/oct/30/veterans-deprived-long-term-support> (May 2017, date last accessed)
- Ashcroft MAA. *The Veterans' Transition Review*. London: HM Government, 2014.
- Hotopf M, Hull L, Fear NT *et al*. The health of UK military personnel who deployed to the 2003 Iraq war: a cohort study. *Lancet* 2006;**367**:1731–1741.
- Fear NT, Jones M, Murphy D *et al*. What are the consequences of deployment to Iraq and Afghanistan on the mental health of the UK armed forces? A cohort study. *Lancet* 2010;**375**:1783–1797.
- Jones N, Mitchell P, Clack J *et al*. Mental health and psychological support in UK armed forces personnel deployed to Afghanistan in 2010 and 2011. *Br J Psychiatry* 2014;**204**:157–162.
- Jones N, Fear NT, Rona R *et al*. Mild traumatic brain injury (mTBI) among UK military personnel whilst deployed in Afghanistan in 2011. *Brain Inj* 2014;**28**:896–899.
- Mulligan K, Jones N, Davies M *et al*. Effects of home on the mental health of British forces serving in Iraq and Afghanistan. *Br J Psychiatry* 2012;**201**:193–198.
- Jones N, Seddon R, Fear NT, McAllister P, Wessely S, Greenberg N. Leadership, cohesion, morale, and the mental health of UK Armed Forces in Afghanistan. *Psychiatry* 2012;**75**:49–59.
- Goldberg D, Williams P. *A User's Guide to the General Health Questionnaire*. Windsor, UK: NFER-Nelson, 1988.
- Weathers F, Litz B, Herman D, Huska J, Keane T. *The PTSD Checklist—Civilian Version (PCL-C)*. Boston, MA: National Center for PTSD, 1994.
- Iversen AC, van Staden L, Hughes JH *et al*. The stigma of mental health problems and other barriers to care in the UK Armed Forces. *BMC Health Serv Res* 2011;**11**:31.
- UK Government, Defence Statistics. <https://www.gov.uk/government/statistics/uk-armed-forces-quarterly-personnel-report-2015> (May 2017, date last accessed).
- Hines LA, Gribble R, Wessely S, Dandeker C, Fear NT. Are the armed forces understood and supported by the public? A view from the United Kingdom. *Armed Forces Soc* 2015;**41**:688–713.
- Hipes C, Lucas J, Phelan JC, White RC. The stigma of mental illness in the labor market. *Soc Sci Res* 2016;**56**:16–25.
- van der Noordt M, IJzelenberg H, Droomers M, Proper KI. Health effects of employment: a systematic review of prospective studies. *Occup Environ Med* 2014;**71**:730–736.
- Beamish TD, Molotch H, Flacks R. Who supports the troops? Vietnam, the Gulf War, and the making of collective memory. *Soc Probl* 1995;**42**:344–360.
- Wessely S, Jones E. Psychiatry and the lessons of Vietnam: what were they and are they still relevant? *War and Society* 2004;**22**:89–103.
- Seal KH, Bertenthal D, Miner CR, Sen S, Marmar C. Bringing the war back home: mental health disorders among 103,788 US veterans returning from Iraq and Afghanistan seen at Department of Veterans Affairs facilities. *Arch Intern Med* 2007;**167**:476–482.
- Vasterling JJ, Proctor SP, Friedman MJ *et al*. PTSD symptom increases in Iraq-deployed soldiers: comparison with nondeployed soldiers and associations with baseline symptoms, deployment experiences, and postdeployment stress. *J Trauma Stress* 2010;**23**:41–51.
- Sampson RJ, Laub JH. Socioeconomic achievement in the life course of disadvantaged men: military service as a turning point, circa 1940–1965. *Am Sociol Rev* 1996;**68**:347–367.
- Buckman JE, Sundin J, Greene T *et al*. The impact of deployment length on the health and well-being of military personnel: a systematic review of the literature. *Occup Environ Med* 2011;**68**:69–76.
- Jones N, Burdett H, Wessely S, Greenberg N. The subjective utility of early psychosocial interventions following combat deployment. *Occup Med (Lond)* 2011;**61**:102–107.
- Hoge CW, Auchterlonie JL, Milliken CS. Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *J Am Med Assoc* 2006;**295**:1023–1032.
- Hoge CW, Toboni HE, Messer SC, Bell N, Amoroso P, Orman DT. The occupational burden of mental disorders in the U.S. military: psychiatric hospitalizations, involuntary separations, and disability. *Am J Psychiatry* 2005;**162**:585–591.
- Hoge CW, Lesikar SE, Guevara R *et al*. Mental disorders among U.S. military personnel in the 1990s: association with high levels of health care utilization and early military attrition. *Am J Psychiatry* 2002;**159**:1576–1583.
- Garvey Wilson AL, Messer SC, Hoge CW. U.S. military mental health care utilization and attrition prior to the wars in Iraq and Afghanistan. *Soc Psychiatry Psychiatr Epidemiol* 2009;**44**:473–481.
- Wright PJ, Kim PY, Wilk JE, Thomas JL. The effects of mental health symptoms and organizational climate on intent to leave the military among combat veterans. *Mil Med* 2012;**177**:773–779.
- Lancaster SL, Erbes CR, Kumpula MJ, Ferrier-Auerbach A, Arbisi PA, Polusny MA. Longitudinal predictors of desire to re-enlist in the military among male and female national guard soldiers. *Mil Med* 2013;**178**:267–273.
- Vasterling JJ, Proctor SP, Aslan M *et al*. Military, demographic, and psychosocial predictors of military retention in enlisted army soldiers 12 months after deployment to Iraq. *Mil Med* 2015;**180**:524–532.