Emotional intelligence and self-determined behaviour reduce psychological distress: Interactions with resilience in social work students in the UK

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Social workers in the UK experience higher levels of burnout compared with other healthcare professionals, making it important to understand how they can develop resilience to protect themselves from psychological distress. The current study aimed to deepen our understanding of the psychological predictors of resilience, which include emotional intelligence, reflective ability, social competence, and empathy, using self-determination theory. This theory suggests that fulfilment of the psychological needs for autonomy, competence, and relatedness will support resilience and protect against distress. We expected these needs to explain additional variance in resilience and distress beyond other emotional and social competencies. Analysis of questionnaire data from 211 social work students in the UK provided partial support for these hypotheses. Autonomy, competence, and relatedness were significantly positively correlated with resilience, and hierarchical regression analysis revealed that they explained somewhat more variance in resilience than previous factors alone (p=.06). Autonomy, competence, and relatedness explained significantly more variance than previous factors alone in psychological distress, although only autonomy and competence correlated with less psychological distress. Unexpectedly, relatedness correlated with more psychological distress. Furthermore, resilience played a mediating role between key variables and psychological distress. Implications for supporting the development of resilience in social work students are discussed.

Keywords: Distress; Emotional intelligence; Empathy; Resilience; Self-determination theory; Students

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Social workers are committed to their profession and experience satisfaction from making a positive difference to the lives of the people that they support (Huxley *et al*., 2005). Social work has been reported to be among the most rewarding of jobs (Rose, 2003), but a report analysing data collected from 2,032 social workers described UK social work as 'a profession on the brink of burnout' (UNISON, 2016, p. 4). In comparison to other professions, social workers report higher levels of work-related stress (Johnson *et al*., 2005; Schwartz *et al*., 2007), and the average career length for a UK social worker has been estimated as just eight years (Curtis *et al*., 2010). Although this is often attributed to structural and organisational factors, such as excessive workloads, poorly-structured bureaucratic systems, and lack of access to services and resources (e.g., McFadden *et al*., 2019), much existing research has focused on how to build individuals' psychological resources for coping with stress to avoid psychological distress (Mor Barak *et al*., 2001; Collins, 2017).

Being a social work student is also stressful (Tobin and Carson, 1994). In addition to the normal stressors associated with being a university student, such as finances, relationships, and time-management (Brown *et al*., 2005), social work students combine academic studies with real-world practice training. This means that they are routinely exposed to problems facing clients or service users, and are responsible for advocacy on their behalf (Ting *et al*., 2006). Thus, social work students are likely to experience more stress and psychological distress than those on traditional university courses (Polson and Nida, 1998).

The experience of distress is not, however, inevitable. Some student social workers thrive in their roles, and this success has, in part, been attributed to their levels of resilience

(Collins, 2008; Kinman and Grant, 2011). Resilience is a common psychological characteristic, frequently referred to as the ability to 'bounce back' from stressful or negative situations (Masten, 2001; Rutter, 1985). Research has consistently shown that resilience is associated with improved physical and psychological health (Monteith and Ford-Gilboe, 2002; Ryan *et al*., 2008), and although resilient people are still likely to experience negative emotions following stressful or traumatic events, they are able to maintain a sense of control so as not to be overwhelmed by them.

Universities can play a key role in developing student resilience by creating optimal curriculums, providing supportive learning and teaching environments, and nurturing student-educator relationships (Holdsworth *et al*., 2018). However, little research has focused on the experiences of resilience among university students (Holdsworth *et al*., 2018), and even less among social work students (Collins, 2015; Kinman and Grant, 2011, 2017; Wilks and Spivey, 2010). This is important because the revised Standards of Practice for Social Workers in England, UK explicitly state that registrant social workers must be able 'to identify and apply strategies to build professional resilience' (Health and Care Professions Council, 2017, p. 7). With this in mind, the current study aimed to investigate the psychological predictors of resilience and distress among social work students in the UK.

Previous research has determined a number of factors that impact resilience. Wilks and Spivey (2010) found that social work students who had higher levels of social support from family and friends were more resilient. Similarly, an international study of university students found that levels of social support and 'campus connectedness' were both positively correlated with resilience (Pidgeon *et al*., 2014). Collins (2015) also noted how an internal sense of control and self-efficacy may be important for developing resilience in social work students.

In the UK, a study of 240 social work students by Kinman and Grant (2011) assessed the extent to which emotional and social competences, i.e., emotional intelligence (Schutte *et al*., 1998), reflective ability (Aukes *et al*., 2007), social skills (Sarason *et al*., 1985), and empathy (empathic concern, perspective taking, empathic distress) (Davis, 1983), were related to resilience. First, they found that more resilience was correlated with less psychological distress. Hierarchical regression analysis subsequently revealed that students who were more resilient were also significantly more emotionally intelligent, meaning that they were able to recognise and understand emotions in themselves and others, as well as control their own emotions. They were also more reflective, socially competent, demonstrated more empathic concern, and experienced less empathic distress. In other words, they could reflect on their actions, had good social skills, felt warmth and compassion for others, but did not experience personal anxiety resulting from the negative experiences of others. In terms of variables related to psychological distress, simple correlation analysis revealed that emotional intelligence, social competence, and reflective ability were related to less psychological distress, whereas empathic distress was related to more psychological distress. Kinman and Grant argued that the development of emotional and social competencies may serve to support the development of resilience, which subsequently reduces psychological distress. They partly tested this proposal, focusing on emotional intelligence as one of the biggest predictors of resilience, and explored whether resilience mediated the relation between emotional intelligence and psychological distress. This prediction was supported: more emotional intelligence resulted in less psychological distress because it was associated with more resilience.

While Kinman and Grant's (2011) research began to explore relevant predictors and consequences of resilience, more research is needed that is theoretically motivated (Sanderson and Brewer, 2017). The current study, therefore, applied self-determination theory (SDT) to

further understand predictors of resilience and psychological distress within this empirically supported framework for well-being and motivation (see Deci and Ryan, 2000, for a review). SDT posits that humans have three universal psychological needs that must be satisfied in order to facilitate mental well-being: autonomy, competence, and relatedness (Ryan and Deci, 2000). Autonomy refers to the need to engage in behaviour that is perceived as self-directed or as coming from within, as opposed to being externally controlled. For example, social work students might experience greater autonomy when they are more involved in the decision about where they complete their placement. Competence refers to understanding how to achieve a particular result or outcome, and feeling capable and efficacious in performing the necessary steps. In this sense, perceived competence is synonymous with self-efficacy. For example, students may feel competent if they believe that they have mastered a particular theory or understood a psychological model. Finally, relatedness refers to feeling connected with significant others and having a sense of belonging. For example, students might experience a greater sense of relatedness if they get on well with their peers and have supportive tutors.

Although scant attention has been paid to the possible relations between self-determined behaviour and resilience specifically, Masten (2001) argued that autonomy, competence, and relatedness may support our adaptive and motivational systems that enable us to cope with adversity, thus viewing self-determined behaviour an antecedent to resilience. Similarly, Skinner and Pitzer (2012) considered our experience of fulfilment of these three needs to work as psychological assets that underpin our ability to bounce back after encountering obstacles or setbacks. They argued that if these three needs are not sufficiently met, this could directly undermine the psychological processes that contribute to resilience, which may, in turn, lower mental well-being.

In the current study, we first sought to replicate and extend Kinman and Grant's (2011) research. We then tested the hypothesis that social work students' experiences of autonomy, competence, and relatedness (self-determined behaviour) would predict their levels of both resilience and psychological distress beyond those emotional and social competencies identified by Kinman and Grant. Finally, we explored the mediating role of resilience in relations between emotional and social competencies and self-determined behaviour with psychological distress, testing the hypothesis that resilience would mediate the relations between these variables and psychological distress.

Method

Participants

The sample comprised 211 social work students from UK universities, with the majority from England. An additional 103 students began the survey but did not complete it (67% completion rate). The resulting sample comprised 190 women (90%) and 21 men, with a mean age of 33.44 years (SD = 9.77, range = 18-55 years). Their ethnicity was White British (*n* = 153); Black/British-African (*n* = 19); White-Other (*n* = 12); White-Irish (*n* = 9); Black/British-Caribbean (*n* = 5); Asian/British-Indian (*n* = 4); Mixed ethnicity – White and Caribbean (*n* = 3); Mixed ethnicity – White and African (*n* = 3); Asian/British-Pakistani (*n* = 2); and Mixed ethnicity – Other (*n* = 2). There were 124 undergraduates (59%), of which 31% were first years, 34% were second years, and 35% were finalists. There were 87 (41%) postgraduates, of which 55% were first years and 45% were finalists. Most students were studying full-time (*n* = 198, 94%), with the remainder studying part-time (*n* = 13, 6%).

Measures

Resilience was measured using the RS14 (Wagnild, 2009), the 14-item version of Wagnild and Young's (1993) resilience scale. This appeared to be the short scale used by Kinman and Grant (2011), although they refer to it as containing 15 items and reference the original 25-item scale. Participants rated their level of agreement with each statement (e.g., 'I usually manage one way or another') using a seven-point scale (1 = strongly disagree, 7 = strongly agree). Scores can range from 14 to 98, where high scores indicate more resilience. The scale has good psychometric properties making it reliable and valid (e.g., Aiena *et al*., 2015). In the present study, the scale had good internal consistency (α = .88).

Psychological distress was measured using the 12-item General Health Questionnaire (GHQ-12: Goldberg and Williams, 1988), which is a reliable and valid measure of psychological distress (Goldberg *et al*., 1997). Participants indicated how often they have been experiencing different problems (e.g., 'Have you recently lost much sleep over worry?'), using a four-point scale (0 = not at all, 3 = rather more than usual). Scores can range from 0 to 36, where high scores indicate more psychological distress. In the present study, the GHQ-12 had good internal consistency (α = .83).

Emotional intelligence was measured using the Schutte Self-Report Emotional Intelligence Test (Schutte *et al*., 1998). Participants rated their agreement with each of the 33 statements (e.g., 'Other people find it easy to confide in me') using a five-point scale (1 = strongly disagree, 5 = strongly agree). Scores can range from 33 to 165, where high scores indicate more emotional intelligence. In the present study, this scale had good internal consistency (α = .89).

Reflective ability was measured using the Groningen Reflection Ability Scale (Aukes *et al*., 2007). Participants rated their agreement with each of the 23 statements (e.g., 'I want to know why I do what I do') using a five-point scale (1 = totally disagree, 5 = totally agree). Scores can range from 23 to 115, where high scores indicate more reflective ability. In the present study, this scale had good internal consistency (α = .89).

Empathy was measured using the Interpersonal Reactivity Index (IRI: Davis, 1983). This 21-item scale measures three dimensions of empathy: (1) empathic concern, i.e., feeling compassion and concern for others; (2) perspective taking, i.e., spontaneously seeing things from other people's perspectives; and (3) personal distress, i.e., feeling discomfort as a result of other people's negative experiences, referred to hereafter as empathic distress. Participants rated the extent to which each statement described them (e.g., 'I sometimes feel helpless when I am in the middle of a very emotional situation') using a six-point scale (0 = does not describe me well, 5 = describes me very well). In the present study, perspective taking (α = .72) and empathic distress (α = .77) had good internal consistency, and empathic concern (α = .67) had reasonable internal consistency.

Social competence was measured by the Social Support Questionnaire (Sarason *et al*., 1985). Participants rated their agreement with ten statements (e.g., 'I feel uncomfortable looking at other people directly') using a four-point scale (0 = not like me at all, 3 = a great deal like me). Scores can range from 0 to 30, where high scores indicate more social competence. In the present study, this scale had good internal consistency (α = .88).

Self-determined behaviour was measured using the Basic Psychological Need Satisfaction at Work Scale (Deci *et al*., 2001), which was adapted by the current authors to assess participants' needs at university (e.g., 'on the job' was changed to 'in class', and 'working' was changed to 'studying'). Participants rated their agreement with 21 statements that assessed the extent to which they experienced fulfillment of their three psychological needs at university: autonomy (e.g., 'I am free to express my ideas and opinions in class'), competence (e.g., 'Most days I feel a sense of accomplishment from studying'), and relatedness (e.g., 'I really like the people I study with'). Relatedness focused on feelings of connection with student peers rather than with course tutors, because previous research has shown that peers provide an important source of support among social work students (Wilks and Spivey, 2010). Each item was rated using a seven-point scale (1 = not at all true, 7 = very true). In the present study, the relatedness sub-scale had good internal consistency ($\alpha = .86$), whereas the subscales measuring autonomy and competence had reasonable internal consistency ($\alpha = .69$ and $\alpha = .68$ respectively).

Procedure

After obtaining ethical approval from the authors' institution, participants were asked to complete an anonymous online questionnaire concerning factors that affect well-being among social work students. The scales were presented in a fixed order. To obtain a sample that was as representative of social work students in the UK as possible, participants were recruited in a number of ways, including on university campuses, by social media, and by an email sent to members of the British Association of Social Workers' student group. The questionnaire took approximately 20 minutes to complete.

Results

First, we examined simple correlations between the predictor variables, i.e., emotional intelligence, reflective ability, social competence, empathic concern, perspective taking, empathic distress, autonomy, competence, and relatedness, with a) resilience and b) psychological distress. We then conducted two hierarchical regression analyses to explore whether the SDT variables (autonomy, competence, and relatedness) explained additional variance beyond the emotional and social competencies in a) resilience and b) psychological distress. We subsequently explored the mediating role of resilience on the relations between the predictor variables and psychological distress to examine whether the predictor variables reduced psychological distress because they supported the development of resilience.

Preliminary analysis confirmed that there were no significant differences between undergraduates and postgraduates, or between full-time and part-time students on any of the variables. These were therefore collapsed for the purposes of subsequent analysis.

Correlations between predictor variables, resilience, and psychological distress

Simple correlations were conducted to establish the relations between the predictor variables with a) resilience and b) psychological distress, while controlling for age, gender, and ethnicity (see Table 1). The simple correlations largely replicated those obtained by Kinman and Grant (2011): emotional intelligence, social competence, and reflective ability were correlated with significantly more resilience and less psychological distress, and empathic distress was correlated with less resilience and more psychological distress. Also, like Kinman and Grant, empathic perspective taking was related to significantly more resilience; however, unlike Kinman and Grant, we found that it was related to significantly *less* psychological distress (they found no relation). Finally, empathic concern did not significantly correlate with resilience,

whereas Kinman and Grant found that it related to significantly more resilience. The current study and their study both found that empathic concern did not relate to psychological distress.

In relation to self-determined behaviour, as expected, autonomy, competence, and relatedness were significantly correlated with more resilience, and autonomy and competence were significantly correlated with less psychological distress. However, relatedness was not correlated with psychological distress, which was in contrast to the hypothesis.

- Table 1: see appendix -

Hierarchical predictors of resilience

This analysis examined whether autonomy, competence, and relatedness explained additional variance in resilience beyond other emotional and social competencies. A hierarchical multiple regression analysis was conducted with three stages (see Table 2). In stage 1, demographic factors including age, gender, and ethnicity were entered as predictors. In stage 2, emotional and social competences were entered, and in stage 3, SDT variables were entered.

In stage 1, demographic factors explained a small, but significant, amount of the variance in resilience (R^2 = .06, F (3, 207) = 4.31, p = .01). Specifically, age (p = .02) and ethnicity (p = .02) were significant individual predictors, but gender was not.

In stage 2 (R^2 = .55, F (9, 201) = 27.30, p < .001), emotional and social competencies significantly improved the model (*F Change* (6, 201) = 36.58, p < .001) and explained a further 49.1% of the variance in resilience. As expected, emotional intelligence was related to significantly more resilience, empathic distress was related to significantly less resilience (*ps* < .001), and perspective taking did not predict resilience. However, empathic concern was

unexpectedly related to significantly less resilience ($p < .001$), whereas Kinman and Grant (2011) found that it related to significantly more resilience. Reflective ability and social competence did not significantly predict resilience, whereas Kinman and Grant found that they were related to significantly more resilience.

In stage 3 ($R^2 = .57$, F (12, 198) = 21.58, $p < .001$), autonomy, competence, and relatedness improved the model, and, together, all variables explained 54.0% of the variance in resilience. This improvement to the model approached significance (*F Change* (3, 198) = 2.53, $p = .06$). Emotional intelligence remained a significant positive predictor of resilience, whereas empathic distress and empathic concern remained significant negative predictors of resilience ($ps < .01$). These data thus provide some support for the hypothesis that autonomy, competence, and relatedness (self-determined behaviour) would relate to resilience.

- Table 2: see appendix –

Hierarchical predictors of psychological distress

This analysis examined whether autonomy, competence, and relatedness explained additional variance in psychological distress beyond other emotional and social competencies. The same hierarchical multiple regression analysis was conducted as above, substituting resilience with psychological distress as the outcome variable (see Table 3).

In stage 1, none of the demographic factors significantly predicted psychological distress ($R^2 = .02$, F (3, 207) = 1.55, $p = .20$). In stage 2 ($R^2 = .21$, F (9, 201) = 5.79, $p < .001$), the addition of emotional and social competencies significantly improved the model (*F Change* (6, 201) = 7.75, $p < .001$), explaining a further 18.4% of the variance in psychological distress. As expected, emotional intelligence was related to significantly less psychological distress ($p = .01$). Gender

(p = .02) and empathic concern (p < .001) were significant negative predictors, meaning that females experienced greater psychological distress than males, as did participants who reported more empathic concern, although these variables were not significant predictors in Kinman and Grant (2011).

Finally, the addition of autonomy, competence, and relatedness in stage 3 (R^2 = .28, F (12, 198) = 6.42, p < .001) significantly improved the model (*F Change* (3, 198) = 6.82, p < .001) and, together, all variables explained 23.6% of the variance in psychological distress. Autonomy (p < .01), competence (p = .02), and emotional intelligence (p < .01) were related to significantly less psychological distress, whereas relatedness (p < .01) and empathic concern (p < .01) were related to significantly more psychological distress. These data partly supported the hypothesis that autonomy, competence, and relatedness (self-determined behaviour) would relate to less psychological distress.

- Table 3: see appendix –

Mediating impact of resilience on relations between the predictor variables and psychological distress

The final analysis examined the mediating effect of resilience on the relations between the predictor variables and psychological distress, controlling for age, gender, and ethnicity. We included only those predictor variables that were significantly correlated with resilience (the mediator) or psychological distress (the outcome) in the previous hierarchical regression analyses, namely emotional intelligence, autonomy, competence, relatedness, empathic concern, and empathic distress (see Figure 1).

- Figure 1: see appendix -

Mediation analysis was conducted in PROCESS (Hayes, 2013) using means-centred scores and 5000 bootstrap samples (Aiken and West, 1991). The direct effects of the predictors on resilience and psychological distress are shown in Table 4. The analysis revealed that resilience mediated the relations between emotional intelligence, autonomy, empathic concern, and empathic distress with psychological distress, as shown by lower level confidence intervals (LLCIs) and upper level confidence intervals (ULCIs) that did not contain zero (see Table 5). In other words, these variables were related to psychological distress indirectly through their impact on resilience: specifically, more emotional intelligence (as found by Kinman and Grant, 2011) and autonomy were related to more resilience and subsequently less psychological distress. In contrast, more empathic concern and empathic distress were associated with less resilience and subsequently more psychological distress. Resilience did not mediate the relations between competence and relatedness with psychological distress, meaning that they directly predicted psychological distress independently of their impact on resilience.

- Tables 4 and 5: see appendix -

Discussion

Given that more resilient social work students experience less psychological distress (Kinman and Grant, 2011), it is important to understand what individual factors affect the development of resilience in order to understand more about how to promote mental well-being. We replicated previous research by confirming the role of several emotional and social

competencies in predicting resilience and psychological distress. We then extended this by demonstrating additionally important roles for the three psychological needs for autonomy, competence, and relatedness, as outlined by SDT. We now consider these findings in turn, addressing their implications for supporting social work students.

Emotional intelligence was one of the most important predictors of both resilience and psychological distress: being more emotionally intelligent was associated with being more resilient and experiencing less psychological distress. Furthermore, resilience was found to mediate the relation between emotional intelligence and psychological distress, suggesting that emotional intelligence indirectly reduces psychological distress because it supports the development of resilience. These findings replicate those of Kinman and Grant (2011), and highlight the importance of being able to evaluate and understand emotions appropriately in oneself and others for being resilient and reducing psychological distress. Thus, social work courses should include training to help students understand and develop emotional intelligence in order to support their own resilience and protect themselves against psychological distress.

We did not find a significant role of reflective ability or social competence in predicting resilience or psychological distress. This was surprising given that Kinman and Grant (2011) found that these two skills were significant predictors of both. This may be due to differences in the nature of participants between the current study and their study: the majority of participants in our sample were undergraduate students, whereas in Kinman and Grant's (2011) study the sample appeared to be composed primarily of first-year postgraduates. Consequently, students in our sample may have had less hands-on experience of working in social work contexts to practice being reflective and social skills. Given these contradictory findings, further research is required to establish the extent to which reflective ability and social competence may be related to resilience and psychological distress in student social workers.

In terms of empathy, the results only provided partial support for Kinman and Grant (2011). Like their study, we found that students who experienced less empathic distress were significantly more resilient, but in contrast, we did not find that empathic distress was related to more psychological distress. Similarly, for empathic concern, we found that students who had less empathic concern were more resilient, whereas Kinman and Grant found that students who had more empathic concern were more resilient. We also found that empathic concern was related to more psychological distress, whereas Kinman and Grant found that it was not significantly related to psychological distress. Finally, in terms of empathic perspective taking, we found that it was not related to resilience, whereas Kinman and Grant found that it was related to more resilience. Both studies found that it was not related to psychological distress.

These contradictory findings suggest that the relations between different types of empathy with resilience and psychological distress remain unclear and require further research. Again, some of the differences between the findings from our study and previous research may be due to differences in participants' previous experience of managing their levels of empathy in real-life situations. Our sample may have had less experience of finding an appropriate level of empathising with clients or service users while protecting their own psychological well-being. Despite the contradictory results, it nonetheless seems important for social work students to learn about these different types of empathy and consider the extent to which they need to develop sufficient levels of empathy when working with clients or service users, without it impacting adversely on their own well-being.

To extend previous research on the emotional and social competencies associated with resilience and psychological distress, the current study applied a psychological theory of motivation and well-being: SDT (Deci and Ryan, 2000). This theory proposes that we have three innate psychological needs that relate to our well-being: autonomy, competence, and

relatedness. Greater experience of the fulfilment of these needs is associated with higher levels of well-being.

First, we found positive correlations between the three psychological needs and resilience, meaning that more autonomy, competence, and relatedness were associated with more resilience. However, these three needs only explained a small amount of additional variance in resilience compared to emotional and social competencies identified by Kinman and Grant (2011), and their addition only resulted in the model approaching significance (p=.06). One reason why their addition was not more significant could be related to the fact that the resilience questionnaire concerned fairly broad issues about coping with life in general, whereas the psychological needs questionnaire focused on need fulfilment in the university learning context. The association between resilience and psychological need fulfilment may have been stronger if need fulfilment focused on the placement context. This is because placements contain more affective challenges, for example working with distressed clients or service users, whereas studying presents challenges that are primarily focused on a cognitive level. Further research could help to unravel the differences in students' experiences of resilience and psychological need fulfilment when studying compared to during placements.

Next, we examined whether autonomy, competence, and relatedness related to less psychological distress. The addition of these factors predicted significantly more variance in psychological distress than the emotional and social competencies identified by Kinman and Grant (2011). However, we found that only autonomy and competence were related to less psychological distress, whereas relatedness was related to *more* psychological distress. The latter finding contradicts previous research, which suggests that all three needs are related to less psychological distress (e.g., Deci and Ryan, 2000). One possible reason why relatedness was associated with more psychological distress may be because the questionnaire asked students

specifically about relatedness with their peers, whereas an alternative would have been to ask them about relatedness with their tutors. Although fellow students are an important source of support at university (Wilks and Spivey, 2010), this type of support is likely to be qualitatively different from the support provided by a tutor. Tutors are likely to be more experienced in providing emotional support than fellow students, and are able to advise about course requirements and professional institutional support services. In addition, some social work students may have more negative lived experiences than students studying more traditional degree subjects (Rompf and Royse, 1994). Encouraging personal reflection on, and sharing these experiences, may foster a culture in which fulfilment of the need for relatedness is high, but also a culture in which experiences of stress and anxiety are accepted and normalised. This may explain why greater experience of the need for relatedness was associated with more psychological distress among social work students.

Finally, we examined the mediating role of resilience on the relations between autonomy, competence, and relatedness with psychological distress, finding that resilience only mediated the relation between autonomy and psychological distress. In other words, autonomy was related to less psychological distress because it supported the development of resilience. Competence and relatedness remained predictors of psychological distress independently of their relation with resilience. The former finding concurs with Masten's (2001) argument that our psychological needs may support our motivational systems that underpin resilience, but the latter findings contradict previous research on the impact of self-efficacy, control, and relatedness on reducing stress (Collins, 2015). These contradictory results suggest that more research is needed to explore the mediating role of resilience on the relations between psychological needs and distress.

These results may also have been because our questionnaire may not have fully captured the experiences of autonomy, competence, and relatedness for social work students because it focused on their university experiences rather than their placement experiences. Also, the autonomy and competence subscales were just below the threshold for good internal consistency, meaning that work is needed to improve the reliability of these adapted scales. Nonetheless, autonomy played an important role in supporting resilience and reducing psychological distress, suggesting that students' need for autonomy is important. Experiencing autonomy is known to play a key role in educational outcomes: students who experience autonomy-supportive teaching, for example by being provided with choices about what and how to study, achieve higher grades than those taught by teachers who are not autonomy supportive (Niemiec and Ryan, 2009). Although social work courses may already provide students with some autonomy over their learning, this could be further enhanced. For example, students could be more involved in choosing their placements, be given more assignment options, and be able to express their preferences for seminar topics. Teaching practices like these may serve to empower students and give them a greater sense of control over their learning, which the present data suggest may help to improve resilience and reduce psychological distress.

Although the present study provides further insights into the links between resilience and psychological distress, it has a number of limitations that should be acknowledged. First, by focusing only on the psychological factors that impact well-being, the study overlooked institutional and organisational sources of distress (e.g., workload, competing deadlines) as well as socio-demographic sources of distress (e.g., sexuality) (Collins, 2017). While developing inner psychological strength is one way in which universities might help their students to cope, it is important for tutors and managers not to lose sight of these broader causes of distress

(Garrett, 2016). It is also worth bearing in mind that the current study was conducted in the UK, and that different countries have their own regulations and policies governing the social work profession. The nature of the external pressures caused by these regulations on social workers should be investigated in different cultural contexts.

Second, students who completed the questionnaire may not be representative. There were a number of students who did not complete the questionnaire after starting it, and an attrition analysis revealed that these students were less resilient and experienced less fulfilment of the need for autonomy than students who completed the questionnaire. Social work students who already have more psychological resources to help them bounce back from adverse circumstances were perhaps more willing to take part in the study. This might also have been the case in previous studies (e.g., Wilks, 2008), which reported generally high levels of resilience in social work students, but did not report details of attrition.

Third, the nature of the study was correlational, and as such it was not possible to confirm the nature of the relations between the psychological factors and resilience. Although the mediation analysis suggests that the variables were antecedents to resilience, experimental research is required to confirm the direction of the effects. Future studies on this topic might conduct randomised controlled trials to test the efficacy of social work courses to increase resilience and/or help to meet students' need for autonomy.

Finally, it is important to note that the outcome measure of psychological distress is not the same as psychological well-being (Seligman, 2002). Indeed, the absence of distress is not the same as the presence of well-being or happiness. Future research might investigate the extent to which the same psychological variables are antecedents to the happiness and well-being of social work students.

In summary, the current study partly replicated previous research, confirming the role of resilience in the relation between emotional intelligence and psychological distress among social work students. However, we found contradictory evidence regarding the relations between reflective ability, social competences, and empathy with resilience and psychological distress. Previous research was extended to explore the role of self-determined behaviour, finding that autonomy, competence, and relatedness predicted more resilience, but that only autonomy and competence predicted less psychological distress. Supporting the development of emotional intelligence and self-determined behaviour may go some way to addressing the experiences of stress and burnout among social workers, and the retention of social workers in this profession.

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Table 1. Summary of the partial correlation coefficients between resilience, psychological distress, and other study variables

	2	3	4	5	6	7	8	9	10	11
1. Resilience	-.44**	.64**	.40**	.03	.41**	-.49**	.41**	.36**	.37**	.20**
2. Psychological distress	-	-.32**	-.19**	.13	-.21**	.22**	-.28**	-.33**	-.34**	-.08
3. Emotional intelligence	-	-	.62**	.29**	.53**	-.39**	.50**	.26**	.33**	.22**
4. Reflective ability	-	-	-	.31**	.56**	-.45**	.24**	.21**	.30**	.11
5. Empathic concern	-	-	-	-	.35**	-.13	.13	.00	.06	.07
6. Empathic perspective taking	-	-	-	-	-	-.39**	.28**	.25**	.29**	.11
7. Empathic distress	-	-	-	-	-	-	-.35**	-.30**	-.33**	-.13
8. Social competence	-	-	-	-	-	-	-	.34**	.35**	.34**
9. Autonomy	-	-	-	-	-	-	-	-	.60**	.51**
10. Competence	-	-	-	-	-	-	-	-	-	.46**
11. Relatedness	-	-	-	-	-	-	-	-	-	-

*$p < .05$; **$p < .01$

df = 206 in all cases

Table 2. Hierarchical multiple regression analysis for resilience

	Stage 1			Stage 2			Stage 3		
	B	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β
Age	.01	.01	.17*	.00	.00	.06	.00	.00	.06
Gender	.24	.15	.11	.14	.11	.06	.18	.11	.08
Ethnicity	.27	.12	.16*	.14	.09	.08	.14	.09	.08
Emotional intelligence				.99	.13	.57**	.99	.12	.56**
Reflective ability				-.15	.12	-.09	-.18	.12	-.10
Empathic concern				-.26	.07	-.19**	-.23	.07	-.17**
Empathic perspective taking				.13	.08	.10	.10	.08	.08
Empathic distress				-.27	.06	-.27**	-.25	.06	-.24**
Social competence				.05	.06	.05	.02	.06	.02
SDT: Autonomy							.08	.05	.12
SDT: Competence							.04	.04	.07
SDT: Relatedness							-.02	.03	-.04
Adjusted r^2		.05			.53			.54	
R^2 change		.06**			.49**			.02	

*$p < .05$; **$p < .01$

Table 3. Hierarchical multiple regression analysis for psychological distress

	Stage 1			Stage 2			Stage 3		
	B	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β
Age	.00	.00	.03	.01	.00	.10	.01	.00	.12
Gender	.21	.11	.14	.24	.10	.16*	.18	.10	.12
Ethnicity	-.07	.08	-.06	-.04	.08	-.03	-.03	.08	-.03
Emotional intelligence				-.31	.12	-.25**	-.30	.11	-.25**
Reflective ability				.01	.12	.01	.05	.11	.04
Empathic concern				.26	.07	.27**	.22	.07	.23**
Empathic perspective taking				-.10	.08	-.11	-.05	.07	-.06
Empathic distress				.05	.05	.07	.01	.05	.01
Social competence				-.10	.06	-.14	-.08	.06	-.10
SDT: Autonomy							-.10	.04	-.20**
SDT: Competence							-.09	.04	-.20*
SDT: Relatedness							.08	.03	.20**
Adjusted r^2		.01			.17			.24	
R^2 change		.02			.18**			.07**	

*$p < .05$; **$p < .01$

Table 4. Direct effects of predictors on resilience and psychological distress

Outcome	Predictor	B	*SE*	t
Resilience	Autonomy	.0897	.0452	1.9831*
	Competence	.0417	.0414	1.0090
	Relatedness	-.0221	.0330	-0.6699
	Emotional intelligence	.9675	.0980	9.8741***
	Empathic concern	-.2281	.0700	-3.2584***
	Empathic distress	-.2409	.0545	-4.4201***
Psychological Distress	Autonomy	-.0905	.0401	-2.2538**
	Competence	-.0863	.0365	-2.3661**
	Relatedness	.0683	.0290	2.3541*
	Emotional intelligence	-.1702	.1050	-1.6211
	Empathic concern	.1718	.0631	2.708**
	Empathic distress	-.0258	.0502	-0.5184

*$p < .05$, **$p < .01$, *** $p < .001$

Table 5. Indirect effects of resilience on the relations between the predictors and psychological distress

Predictor	Bootstrap Estimate	*SE*	LLCI	ULCI
Autonomy	-.0172	.0106	-.0469	-.0018
Competence	-.0080	.0098	-.0319	.0074
Relatedness	.0042	.0070	-.0083	.0204
Emotional intelligence	-.1852	.0695	-.3329	-.0643
Empathic concern	.0437	.0219	.0109	.0985
Empathic distress	.0461	.0194	.0155	.0925

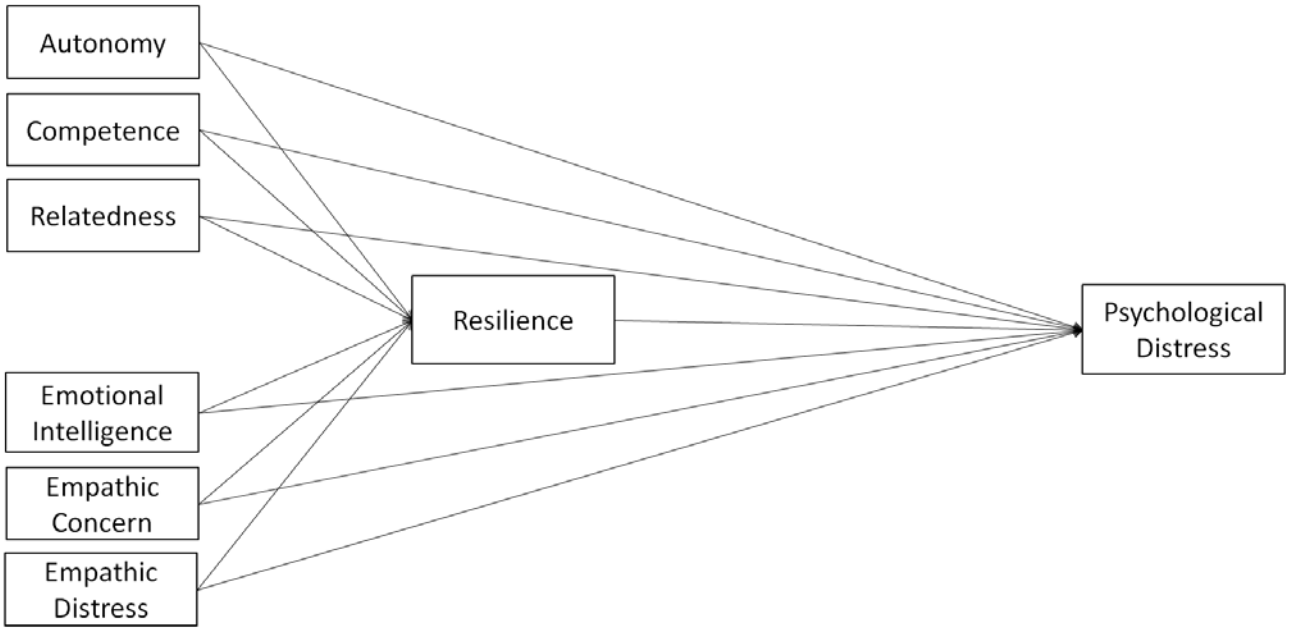

Figure 1. Mediation of resilience on the relations between autonomy, competence, relatedness, emotional intelligence, empathic concern, empathic distress, and psychological distress