# An Online Randomised Controlled Trial of the Positive Confiding to Improve Emotional Wellbeing in Nurses during the COVID-19 Pandemic: A Protocol Study

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Abstract: In the time of COVID-19 pandemic, nurses suffering from stress and depression. Meanwhile, previous studies indicated that the psychological well-being of medical staff benefited from confiding. However, hitherto there is no experimental evidence supporting the implementation of confiding for nurses to optimize their emotional outcome. Based on previous studies and the background of positive psychological, we creates the "positive confiding intervention", which means asking participants to consider the social support or positive meaning gaining from experience of confiding occupational hassles weekly. An online two group randomised controlled trial design will be used in this study. We will use random grouping method. A control group and a "positive confiding intervention" group will comprise 100 eligible participants in total. The expected result is that the "positive confiding intervention" will significantly improve nurses' positive affect, interpersonal emotion regulation, perceived social support and cognitive reappraisal, as well as decrease negative affect and depression.

## 1 INTRODUCTION

Amount of studies revealed that nurses face extraordinary stresses in the medical environment which can lead to choronic burnout (Cohen-Katz 2004, Happell 2013, Dall'Ora, 2020) and damage nurses' emotional wellbeing (Huang 2018, Boyle 2018, Boyle,2021), especially in the time of the COVID-19 pandemic (Sanliturk 2021, Murat 2020). Several systematic reviews reported that, in time of the COVID-19 pandemic, quite a few of healthcare workers' suffering from stress, anxiety, depression and sleep disturbance (Salari 2020a, Salari 2020b, Sahebi 2021, Maqbali 2021, Marvaldi 2021). Especially, it was reported that, during the time of the COVID-19 epidemic, the prevalence of sleep disturbance, anxiety and depression respectively were 43%, 37% and 35% (Maqbali 2021). Therefore,

improving nurses' emotional wellbeing will be an important intervention goal, which would also benefit patients' caring (Di Muzio 2019, Giorgi 2018).

As a wide reach and low cost intervention with high ecological validity, confiding to others maybe an effective strategy for improving nurses' emotional wellbeing. It was found that, 79.3% medical staff would confide their troubles to others (Liu 2020), and comparing to confiding troubles to others, never confiding troubles to others was associated with medical staff's self-reported anxiety (OR=2.2) and depression (OR=2.0) under the COVID-19 epidemic (Liu 2020). This result is consistent with a study based on a big sample of 123,794 adults, which revealed that the most protective factors for depression are frequency of confiding in others (adjusted OR=0.85) (Choi 2020). Previous studies has indicated that, confiding is conducive to people's psychological well-being (Choi 2020, Slepian 2018, Eldridge 2020, Pennebaker 1997), and medical staff also benefits from confiding (Liu 2020). However, hitherto there is no experimental evidence supporting

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the implementation of confiding for nurses to optimize their emotional outcome.

Confiding means disclose one's own personal experience including emotions, attitudes or opinions, to others. The need of confiding is universal. Humans have the urge to to confide, and will release stress by confiding (Eldridge 2020, Kant 1963, Smith 2002). Confiding has remained an important component of many forms of psychotherapy (Kelly 1996). A previous study showed that, as for women, their reasons for not confiding were unsupportive social interactions and lack of social support, and they tended to confide to their family and friends instead of health workers, (Figueiredo 2010). In real life, decisions of whether to confide hassles to others are personal, and individuals pick and choose both what information they share and with whom they share it.

There are several frameworks contextualizing decisions of disclosure (or confiding), such as the Communication Privacy Management Theory, the Disclosure Processes Model, the Health Disclosure Decision-Making Model and the Revelation Risk Model. These frameworks above reflect the agreement that the decision of whether to confide private information depend on the advantages and disadvantages (Afifi 2020). Many factors influence the effects of confiding on well-being, including "the type of relationship, the valence of the stressor, the response to the disclosure, and the meaning generated from the disclosure" (Slepian 2018, Afifi 2020). In literature (Eldridge 2020, Pennebaker 1997, Lu 2019, Howell 2009), several positive meanings of confiding were mentioned: 1) confiding helps to form and develop interpersonal relationships; 2) people can benefit from confiding by co-regulating emotional experiences; 3) confiding can help people co-construct meanings, as well as affirm, challenge and develop their identity; 4) future social support can be positively shaped; 5) By confiding, people may could receive others' concrete aid; 6) Confiding may help people get more message about others' feels about similar things, and people can compare and learn others' emotion regulation strategy.

In short, the main benefit of confiding is helping confider receive social support. According to Kahn and Antonucci (Kahn 1980), "there are three types of social support or support exchanges: aid, affect, and affirmation". Aid means tangible assistance, including providing money or sick care, information and advice. Affect means emotional support, including perceived love, care, fondness or affection of others. Finally, affirmation is the intangible communication to another convoy member that members share or respect the same values, goals, and

aspirations. Additionally, many studies indicated that, perceived support is more helpful than received support (Santini 2015). So, it is important that people would perceive the social support they can benefit from confiding, which is an active and positive behavioral model. As a recent study reported that, confiding predicts higher well-being through framing confiding as a source of social support (Slepian 2018).

From the perspective of Interpersonal Emotion Regulation, Rimé (2007) argues that emotional episodes are virtually always followed by long-term congnitive and social effects, and particularly individul emtional experiences elicit important social behaviors by which the actor informs his or her social partner of what happened and shares with them related thoughts and feelings. It was expounded that (Rimé 2007), people who share positive emotions may make their positive effect and social bonds improve. For negative emotional experience, people would tolerate the reexperience involved in social sharing because of the final benefit it provides them (Rimé 2007). It was concluded that there are three classes of regulation needs, including sociaffective needs, congnitive needs and action needs (Rimé 2007). It was reported that the reasons for sharing negative emotion was socioaffective motives, including receiving support, validation and comfort (Rimé 2007). As an integrative review argues that interpersonal emotion regulation may decrease depression through improving perceived social support (Marroquín 2011).

Above all, similar to positive psychology's use of research on the "Three Good Things Intervention" and the "Meaning-Oriented Interventions" (Parks 2004), we created the "positive confiding intervention", which means asking partcipants to consider the social support or positive meaning gaining from experience of confiding occupational hassles and record the positive meanings gaining from the most satisfied confiding experiences weekly. In light of the Handbook of Positive Psychological Interventions, by participating online positive psychological interventions may make people be more willing to manage of their own heath, because online interventions provide methods to enlighten their behaviour, thinking, and interpersonal interaction (Parks 2004). Therefore, we are going to conduct the "positive confiding intervention" by online techniques.

## 2 STUDY PURPOSES

This study aims to test the efficacy of our created "positive confiding intervention" to improve nurses' emotional wellbeing, including improving nurses' positive affect, interpersonal emotion regulation, perceived social support and cognitive reappraisal, as well as decrease negative affect and depression.

## 3 METHODS/DESIGN

### 3.1 Design and Participants

The study has received ethical approval from the Ethics Committee of the Institute of Psychology, Chinese Academy of Sciences. A two group randomised controlled trial design will be used in this study. The G*Power 3.1 (Faul 2007) was used to estimate the required number of participants (see Table 1). As seen in Table 1, the required overall number of participants is 45, which can guarantee enough sample size for detecting an effect.

Table 1 Sample size estimated by G*Power 3.1.

| Input parameters | Output parameters |
|---|---|
| Effect size d | 0.5 |
| α err prob | 0.05 |
| Power (1-β err prob) | 0.95 |
| Number of groups | 2 |
| Noncentrality parameter λ | 3.35 |
| t value | 1.68 |
| df | 44 |
| Total sample size | 45 |
| power | 0.95 |

We decide to improve the number of participants to 100 participants (see Table 2). Nurses aged 18-55 years old, working in domestic public hospitals in China, won't leave this job during the study period.

Table 2 Inclusion/exclusion criteria.

| Inclusion criteria | Exclusion criteria |
|---|---|
| Nures aged between 18 and 60 years old | Cannot grantee completing this study |
| Working in domestic public hospitals in China | Participating in other similar psychological studies |
| Won't leave this job during the study period | Taking a long vacation during the study period |
| | Do not need to take care of patients during working time |

### 3.2 Randomisation and Allocation

After completing all the baseline measures, all the participants will be randomly grouped, which means all the objects will participate in the "positive confiding intervention" group or control group randomly (see Figure 1). We will use a computer program to generate an allocation sequence, which will be used for random allocation.
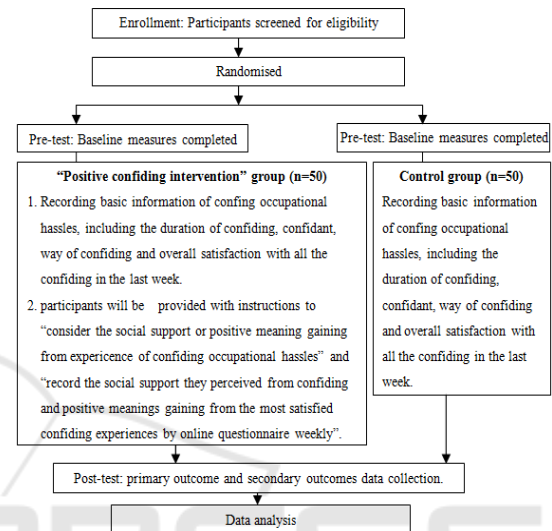


Figure 1: Flow chart of trial procedure.

In the "positive confiding intervention" group, participants will be provided with instructions to "consider the social support or positive meaning gaining from expericence of confiding occupational hassles" and record the social support they perceived from confiding, and record positive meanings gaining from the most satisfied confiding experiences by online questionnaire weekly. In the online questionnaire, participants will be asked to think about how much social support[28] or positive meaning they have perceived, including: 1) concrete help for solving problems, advice for solving problems and information helping promote understanding; 2) emotional support including enhancing eomtional connection, helping improve positive emotion or decreasing negative emotion, 3) feeling validated or supported, promote understand or endorse of self and increase affirmation of professional value. In the online questionnaire for control group, only the basic information of confiding occupational hassles will be involved, including the duration of confiding, confidant, ways of confiding and overall satisfaction with all the confiding in the last week, the same as in the "positive confiding intervention" group.

# 4 DATA COLLECTION AND OUTCOME MEASURES

## 4.1 Background Information

Demographic data, socioeconomic status, occupational status and health condition will be collected before intervention. Demographic data includes age, gender, marital status, and nuber of childern. Socioeconomic status includes education background and if there is difficulty in paying bills, saving money, having enough pocket money every month. Occupational status includes working years as a nurse, professional title and whether participate work in shift work. Health condition includes perceived overall health condition, perceived overall sleep quality in the past one month.

## 4.2 The Primary Outcome Measures

The Patient Health Questionnaire (PHQ) is used to assesse depression, consists 9 items and rated with four-point degrees according to symptom in the past two weeks (Kroenke 2004).

The simple positive and negative affect scale (PANAS-S) is a 12-item likert-style (4-point) rating scale that assesses affect by situation or persistent affect. For each item, a four-point degrees of the scale was used to assess the frequency arise in the past week (0=never; 1= once in a while; 2= sometimes; 3= often; 4=always). Thereinto, 8 items are express positive affect, and 4 items express negative affect. Higher scores means more positive or negative affect (Kahneman 2004).

Nurses Work Stressors Scale (NWSS) is a is a 35-item likert-style (4-point) rating scale that assesses nurses' source of occupational stress. Higher scores means more work stress (Li 2000).

## 4.3 The Secondary Outcome Measures

The Interpersonal emotion regulation Questionaire (IERQ) consists 20 items, which use a 5-point likert-style rating scale to assesse how people regulate their emotions by using others (Hofmann 2016). For each item, a five-point degrees of the scale was used.

The Multidimensional Scale of Perceived Social Support (MSPSS) consists 12 items, which measures how many social support people can feel. For each item, a 7-point degrees of the scale was used. (Dambi 2018).

The emotion regulation questionnaire (ERQ) is used to assesse cognitive reappraisal and expressive suppression, which consists 10 items. For each item, a 7-point degrees of the scale was used. (Gross 2003).

The Table 3 shows all the measures used in this study, and the time-points of measurement have been presented too.

# 5 DATA ANALYSES

## 5.1 Primary Analyses

We will use descriptive statistics to summarize the characteristics of all the participants, and analyse the primary and secondary outcome measures by using t test with a between subject factor of intervention condition and a within-subject. Besides, we will use effect sizes (Cohen's d) (Cohen 1988) to illustrate differences in all the measured results between the before and after the intervention.

Table 3 Timeline for data collection.

| Measure-ment time-point | Measures | | | | |
|---|---|---|---|---|---|
| | PHQ-9 | PANAS | IERQ | MSP SS | NW SS |
| Basline | × | × | × | × | × |
| 1 weeks | | × | | | |
| 2 weeks | × | × | | | |
| 3 weeks | | × | | | |
| 4 weeks | × | × | | | |
| 5 weeks | | × | | | |
| 6 weeks | × | × | | | |
| 7 weeks | | × | | | |
| 8 weeks | × | × | × | × | × |

# 6 CONCLUSIONS

Accumulating evidence indicated that nurses confronted a lot of stress, anxiety, depression (Salari 2020a, Salari 2020b, Sahebi 2021, Maqbali 2021, Marvaldi 2021). As an important component of many forms of psychotherapy (Kelly 1996), confiding is also highly common among laypersons. However, hitherto there is no experimental evidence supporting the implementation of confiding for nurses to optimize their emotional outcome. Empirical research has highlighted the harm of repress the need of confiding, as well as a lot of benefits of confiding. However, some harm of

confiding also has been put forward (Kelly 1996, Slepian 2018). To explore the effective model of confiding, this study creates the "positive confiding intervention" based on previous studies and will conduct an online randomised controlled trial to exam its effect for promoting emotional wellbeing by comparing the "positive confiding intervention" with control group. The expected result is that the "positive confiding intervention" will significantly improve nurses' positive affect, interpersonal emotion regulation, perceived social support and cognitive reappraisal, as well as decrease negative affect and depression. will significantly improve nurses' positive affect, decrease negative affect and depression, and the mediating variables of these effect will be interpersonal emotion regulation, perceived social support and cognitive reappraisal.

This study will build on suggestions from previous studies that confiding tends to promote mental well-being. Our study firstly developed the "positive confiding intervention" as an effective confiding for nurses to improve emotional wellbeing innovatively, which is a wide rich and low cost intervention with high ecological validity. By examing the effect of this "positive confiding intervention" on nurses, this study would further discuss the precise mechanism through how this "positive confiding intervention" promots nurses's emotional wellbeing. This study will contribute to build an effective psychotherapy method applying to nurses. In addition, this study will encourage people to positively confiding, which will also contribute to the study of social support from the perpective of positvely constructing social support.

## FUNDING

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