ABSTRACT

Drawing on the conservation of resources (COR) theory, the authors investigate whether and how social support impacts the emotional labor of live streamers through professional identity. They also explore the boundary conditions by focusing on the moderation effect of emotional intelligence. Based on a sample of 331 live streamers in the content industry, the results show that social support weakens (enhances) live streamers’ surface acting (deep acting) by enhancing their professional identity. Emotional intelligence significantly moderates the professional identity-emotional labor relationship. In addition, they find that emotional intelligence strengthens the negative indirect effect of social support on surface acting through professional identity but weakens the positive indirect effect of social support and deep acting through professional identity. They also discuss theoretical contribution in emotional labor literature and practical implications for live commerce.

KEYWORDS

Content Industry, Emotional Intelligence, Emotional Labor, Professional Identity, Social Support

INTRODUCTION

In the past five year, the live streaming industry in China has boomed with the rise of 4G technology and ubiquitous usage of smartphone (Zheng, Xiong, Chen, & Li, 2022; Zheng, Fan, Wang, & Liu, 2021; Zheng et al., 2022). Social Networking Sites (SNS) and e-commerce platforms have provided a foundation for the rapid development of live streaming commerce. According to Mckinsey’s report, live streaming commerce in China grew at a compound annual growth rate (CAGR) of more than 280
percent from 2017 to 2020, reaching an estimated 171 billion US dollars in 2020. In the first half of 2020, there were more than 10 million live streams and more than 400,000 active live streamers.

During the live streaming, the streamers show how products are developed and used according to viewers’ needs, clarify any areas of their confusion, and interact with them in real-time to stimulate immediate purchases. To keep viewers watching longer, live streamers make their shows as engaging and immersive as possible, and express right emotions in order to foster viewers’ active attitudes and behaviors in communications and transactions. During the interactions, displaying organizational desired emotional expressions and suppressing others are very important for live streamers who interact with customers to promote their product. Such psychological regulation process of employees during service delivery is characterized as emotional labor (Ashforth & Humphrey, 1993; Grandey, 2003; Hochschild, 1983). It can be achieved either while live streamers alter inner true feelings to match the required emotions of the work (deep acting), or while they fake the required emotional expressions (surface acting) (Grandey, 2000, 2003). Several meta-analyses have shown that deep acting is more likely to be linked with positive outcomes on employees, customers and organizations, but surface acting has a negative impact on the above outcomes (Chen et al., 2021; Fang et al., 2019; Xu et al., 2020). Therefore, how to address live streamers’ emotional labor issues and hereby improve corporate performance will be important in the theoretical and practical domain.

The recent studies have adopted the conservation of resources (COR) theory to explore the individual and organizational antecedents of emotional labor (Wen et al., 2019; Xu et al., 2020). According to the COR theory, individuals often tend to conserve and gain available resources and try to avoid threats that may result in exhaustion of resources (Hobfoll, 1989). And resources are further divided into external resource that individuals hope to gain (e.g., social support) and internal resources (e.g., objects, time, knowledge, motivation, personal characteristics or inner energy) (Hobfoll, 2001). While they lose internal resources or fail to gain external resources outside, they would experience stress or emotional exhaustion which prompts them to take action to conserve resources by changing their emotional labors. Social support is among the most important antecedents that have been investigated in recent years (Lam & Chen, 2012). Usually, the organizations are trying to provide various supports that enable the frontline employees to cope with stress (Hwa, 2012; Lam & Chen, 2012; Moon et al., 2013). Social support from organization, coworker, supervisor, family and etc. is regarded as a kind of external resource, which can supplement an individual’s inner energies by producing positive affective perceptions (Lam & Chen, 2012; Moon et al., 2013; Wen et al., 2019). However, the findings in existing studies has indicated that the relationship between social support and emotional labor strategies is complex and inconsistent (Xu et al., 2020). And more importantly, those studies provide little evidence on how and why social support can impact emotional labor strategies. Therefore, there is a need to understand how social support relates to different emotional labor strategies (e.g., surface acting and deep acting), including mediating and moderation effects that explain this relationship.

To address this research gap, our paper uses the COR theory to explain the effects of social support on emotional labor strategies (e.g., surface acting and deep acting), and investigates potential underlying mechanisms and boundary conditions. From this perspective, we argue that social support, as an important external resources, may impact live streamers’ emotional labor strategies directly by providing tangible or psychological assistance. In addition, social support is predicted to have an indirect effect on emotional labor strategies through the mediating influence of employees’ self-concept in the form of professional identity. Specifically, we propose that social support shapes how live streamers perceive the meaning of the job itself, which is identity of profession. As a self-concept for the career, professional identity can help employees to better recognize emotional rules of organization, thereby regulate their emotional labor (Guan et al., 2016). Moreover, this perception of professional identity may also boost a person’s self-esteem, enhance a person’s motivation to regulate affective reactions in terms of deep acting instead of surface acting, especially if that person can achieve a positive professional identity (Shahzad et al., 2021; Zhang et al., 2019). Finally, our
paper further extends existing research by proposing emotional intelligence as a moderator of the professional identity - emotional labor relationship and of the indirect relationship of social support on emotional labor through professional identity.

Our study aims to make several contributions to extant literature. First, our paper contributes to the emotional labor literature by providing empirical evidence in e-commerce live streaming industry that social support not only enhances deep acting of streamers but also reduces their surface acting during the interaction with viewers, highlighting the importance of social support in e-commerce live streaming industry. Second, we respond to the call of Xu et.al (2020) by examining the mechanism of how and why social support can impact emotional labor strategies (Xu et al., 2020). Specifically, by introducing professional identity as a mediator, we could better understand the process of how social support influence emotional labor strategies via shaping one’s perceptions regarding a professional role. Third, our paper examines emotional intelligence as a moderator to the mediation effects of professional identity discussed above. Previous studies suggest that emotional intelligence may buffer the negative effects of surface acting by supplying resources employees need and is important to their emotional labor (Wong & Law, 2002; Xu et al., 2020). Our study furthers the existing findings by clarifying how emotional intelligence interacts with professional identity to influence the employees’ recognition of emotional rules and commitment to their profession, thereby reduce surface acting and increase deep acting. Finally, our study also provides practical guidance for online marketing practitioners on improving live streamers’ emotional labor.

RESEARCH CONTEXTS AND LITERATURE REVIEW

E-Commerce Live Streaming in China

In the early 2000s, live streaming of video games and singing/dancing first became popular in the live streaming platforms such as Huya, Douyu and Panda TV. The streamers acted as information sources and content contributors, delivering the live video content to viewers over the internet. Viewers participated in on-line community by writing online reviews and buying virtual gifts to the streamers, which appear as little animations on the screen in real time. Then, the streamers respond to the gifts in real time, engaging with the viewers who pay generous sums and thanking them directly. In April of 2016, the e-commerce giant Taobao established an in-app platform called “Taobao Livestream”, which was the first to link up live streaming with an e-commerce store to allow viewers to watch and shop at the same time. Thereafter, the idea of live streaming goes beyond entertainment to e-commerce which is one of the world’s fastest growing industries (Ahluwalia, & Merhi, 2020; Hou et al., 2021; Mou et al., 2020; Yuan et al., 2021; Zhao et al., 2020). A number of originally e-commerce platforms (e.g.,Taobao, Pinduoduo and JingDong), social networking sites (e.g.,Weibo, Wechat and Xiaohongshu), and entertainment live streaming apps (e.g., Yizhibo, and Kuaishou) have now also incorporated e-commerce functionalities. According to a report released by China National Internet Information Office in September 2020, it is expected that by the end of 2021, the transaction volume of e-commerce live streaming is expected to exceed 2.5 trillion RMB yuan, accounting for about 20% of the total amount of Internet e-commerce. In the year of 2020, 6939 e-commerce live streaming companies emerged across the country, a 360.8% year-on-year growth, and the number of e-commerce live streamers rocketed from 2.7 million to 12.3 million'. These live streaming companies are distributed in Taobao Live, TikTok, Kuaishou, Xiaohongshu, Pinduoduo and other 200 live streaming platforms, acting as a powerful marketing tool at an extremely low cost.

E-commerce live streaming entails the real-time broadcast of video content to viewers, which provides viewers with a FaceTime-like interface with the streamers. With this feature, streamers are able to demonstrate different perspectives of the products and respond to the pressing questions of potential customers, making promotional activities more convincing and effective. In a fashion live streaming, the seller showcases its products to viewers by a live model (most of time, the streamer herself) dressing up in the merchandise besides of presenting the product information in the traditional
form of texts and images on the platform. The viewers can have a live chat with the streamers, ask
them to show the products according to their needs. Upon the request, the streamers will demonstrate
the apparels in a variety of poses or any kind of angles to suggest how best to mix and match the
clothes while also suggest new additions. Meanwhile, the streamers literally interact with viewers
through a chat function or reaction buttons every second, which make viewers to thumb up, generate
electronic word-of-mouth (e-WOM), etc.

Although streamers can attract traffic to watch the live streaming via Social Network Sites
(SNS) and other advertisings, the views do not actually have a strong sense of participation. To retain
viewers and achieve sales performance, the streamers need to answer viewers’ queries and react to
their requirements while broadcasting. They need to create a fun, unique and interactive emotional
space, which makes the show as engaging as possible and motivates potential customers to watch
longer and place order eventually. Moreover, the streamers can further enhance emotional connections
with viewers by setting up fan community. Such intimate relationship between streamers and viewers
can ensure a more stable sales.

**Emotional Labor: Surface Acting and Deep Acting**

This process of emotional operations to attract and retain reviews could be regarded as emotional
labor of e-commerce live streamers. In most cases, streamers must consciously portray themselves in
a certain way to meet the emotional needs of a wider viewers and the rules of live streaming platforms
(Yang, 2021). Therefore, streamers have to design a new emotion carefully by suppressing emotions
and behaviors that are inconsistent with platform rules and catering to those values that the viewers
have recognized, even if these emotions conflict with their real feelings. Efforts to conceal their
true emotions, to feel expected emotions or to behave as if they are feeling these emotions involves
a pattern of effort to do the job, which is called “emotional labor” (Grandey, 2000; Hochschild,
1983). Briefly, it is defined as the efforts spent to display emotions expected by the organization.
According to Hochschild (1983), emotional labor can be further differentiated with regards to
different acting strategies, known as surface acting and deep acting (Hochschild, 1983). In surface
acting, live streamers spend their efforts to pretend to feel or fake the expected emotions during
the live interaction with customers although they do not feel that way (Grandey, 2000). Usually,
they will adjust their emotions by changing outward appearance such as voice tone, body gesture,
facial expression, and motions. However, the emotion actually perceived by live streamers does not
conform to the rules of the organization’s emotions (Hochschild, 1983). In deep acting, they would
try to change their emotions which do not meet the performance of organizational requirements by
utilizing their preparation, imagination or past experience to express the circumstance fitted feelings
(Lee et al., 2019). And they actually experiencing the organizational expected emotions because they
believe it is the case (Grandey, 2003).

Existing studies demonstrate that an individual’s external resources or inner energies can help
change his emotional labor behaviors in works, such as the adoption of deep acting or surface
acting (Kim et al., 2012; Lam & Chen, 2012; Yin et al., 2013). For example, Grandey (2000) has
demonstrated that social support is one of the predominant variables affecting the way emotional
labor is expressed (Grandey, 2000). Yin et al. (2013) find that emotional intelligence, as an emotional
ability or resource for service employee, is positively related with deep acting strategy (Yin et al.,
2013). Kim et al.(2012) find that emotional intelligence is positive associated with deep acting of
hotel frontline employees, but negatively related with surface acting (Kim et al., 2012). As a deep
psychological processing, deep acting thus requires both internal and external resource to generate
a series of positive emotions and support an individual’s emotive effort.

More importantly, although both emotion acting strategies are internally false, they represent
different intentions or motivations of an individual for work (Grandey, 2000, 2003). Deep acting
highlights regulating the inner feelings to meet requirements of the work (Grandey, 2000; Hülsheger
and Schewe, 2011), which can be regarded as intrinsic motivation of an individual. This good
motivation may not be present in employees who do not accept their work roles (Ashforth & Humphrey, 1993). It reflects that employees have emotional attachment to the organization’s goals and values as well as a willingness to help the organization achieve its objectives (Meyer et al., 2002). This intrinsic motivation can be derived from the meaning of the work itself, such as an identification with the profession. However, unlike the intrinsic motivation of deep acting, surface acting emphasizes shaping outward appearance to meet the requirements of the organization rather than altering the inner true feelings (Grandey, 2000). On the one hand, the persons using surface acting are merely concerned with the benefits of conforming to the display rules, such as keeping the job and improve their feedback on performance. On the other hand, there is no need for affective commitment and self-identity to the organization and their profession. Therefore, while the employees experience more incongruences between emotional rules of organization (what they follow rules to do) and self-identity of their profession (what they commit to do), they will be more likely to fake their emotions using surface acting strategy during the interaction with customers.

THEORETICAL FOUNDATION AND HYPOTHESES

Social Support and Emotional Labor

Social support refers to the extent to which an individual’s desire recognition, understanding, respect, and support from family members, friends, coworkers and organizations (Wills, 1991). That means the individual may obtain all kinds of tangible or psychological support in the surrounding environment. Specifically, it may consist of communicating constructive feedback and guidance while providing tangible assistance and expertise to enable employees to complete the job, expressing empathy, and caring about the needs of employees (Zhang et al., 2018). According to COR theory, individuals give priority to protect internal resources and seek the support of external resources and the amount of employees’ resources may impact the choice of emotional labor strategies (Lam & Chen, 2012). Social support can both enhance one’s available resources and can replace or provide other resources that have been lacking (Hobfoll, 1989). For example, the empirical study of Nam and Kabutey (2021) finds that social media use at work may help employees conserve them of personal resources (Nam & Kabutey, 2021). Therefore, as an external resource, it can timely compensate streamers for the internal resources consumed in emotional labor during the live streaming. Those high in social support may access to a variety of resources which may help to buffer them against stressful events in emotional labor (Lam & Chen, 2012), thus tend to engage in deep acting. On contrast, those who lack resources would choose to minimize resource consumption and conserve energy through surface acting. The relationship between social support and emotional labor has also been uncovered in several studies. For example, Lam and Chen (2012) found that social support prompts service providers to engage in less surface acting and more deep acting during service interactions in hospitality industry (Lam & Chen, 2012). Therefore, we hypothesis that higher levels of social support lead streamers to perform deep acting, while lower levels of social support lead them to fake their emotions through surface acting.

**H1a:** Social support has a negative effect on surface acting.
**H1b:** Social support has a positive effect on deep acting.

Professional Identity and Emotional Labor

Professional identity is defined as the relatively stable and enduring constellation of attributes, beliefs, values, motives and experiences that individuals use to define themselves in their professional role (Dobrow & Higgins, 2005; Schein, 1978; Zheng, Bai & Cross, 2021). A streamer may gradually understand and recognize the professional meaning and his role or social-based work identities in the course of career. It will shape an individual’s attitude, affect and perception towards his professional
role and work purpose, then the subsequent professional behavior (Johnson et al., 2012; Siebert & Siebert, 2005).

We propose that professional identity may help live streamers to better recognize emotional rules of live streaming platform or live streaming company, and lessen their attentions towards utilitarian gains from fake emotions. During the interactions with customers, emotional rules of the live streaming company or streaming profession generally require streamers to show positive emotions and behavior to customers. And the live streaming companies always provide a series of incentives to encourage the streamers who follow the requirements of streaming profession. But streamers with low professional identity may less identify with the emotional rules of organization. In order to avoid this incongruence, they have to hide or disguise their own emotions. On the contrary, streamers with high professional identity are more likely to comply with the emotional rules in natural and spontaneous way, without hiding and faking (Ashforth & Humphrey, 1993). Therefore, they need not worry to regulate their internal feelings or display the required emotions, and are less likely to act superficially in live streaming. Ashforth and Humphrey (1993) also find that one of the reasons why an individual adopts the surface acting is that the low level of professional identity does not fit with the requirements of the profession (Ashforth & Humphrey, 1993). Furthermore, professional identity may help individuals to define the work’s purpose and assign meaning to what they do in the work (Haslam, 2012). Once a positive professional identity has been formed, individuals are more committed to values and practices of their profession (Haslam, 2012; Hirschy et al., 2015; Wang et al., 2020). And because of the internalized congruence between one’s personal and professional values, those high in professional identity will be intrinsically motivated to invest personal resources (e.g., time, efforts, emotional and psychological energies) (Hirschy et al., 2015), and foster meaningful deep acting activities with customers by showing warmth, empathy and consideration. Accordingly, we hypothesis that:

H2a: Professional identity is negatively related to surface acting.
H2b: Professional identity is positively related to deep acting.

**The Mediating Effect of Professional Identity**

Recent research shows that social support is effective to reduce emotional exhaustion (Nam & Kabutey, 2021), because it helps to reinforce the positive aspects of the self, in essence self-concept when stressful times have led one to lose sight of them (Swann & Predmore, 1985). As a kind of self-concept, professional identity reflects one’s perceptions regarding a professional role (Dobrow & Higgins, 2005). It will be related to the variety of support individuals receive from others in their careers (Dobrow & Higgins, 2005). First, an employee with good social support means more respect and understanding from others, which may help to establish the positive links between self and profession (Strauser et al., 2008). For instance, Wei et al. (2021) find that prompting recognition, understanding, respect, and support for nursing students is crucial for their professional identity (Wei et al., 2021). Second, employees learn who they are as a professional by seeing themselves in the eyes of others (Roberts et al., 2005). The mutual trust, interdependence, and reciprocity that characterize relationships in the surrounding environment offer a great intermediary for reflecting and shaping their professional identity (Swann, 1987). Third, social support may provide access to different kinds of resources and information, which may reinforce an individual’s professional identity exploration (Dobrow & Higgins, 2005).

Identification with the profession will trigger individuals to have an internal sense of obligation to cooperate to work in return (Prosser, 2006). Through this process, streamers may consciously abide by the emotional rules of the platform or organization, and when they realize that their current emotions do not meet the emotional requirements, they may manage and adjust in a positive way rather than by surface acting to hide the real emotions. In addition, profession identity can influence
individuals’ perceptions of a job environment and can thereby have a positive influence on the commitment to work, including enhancing a sense of belonging, self-image building, and professional satisfaction (Piil et al., 2012). It is a key way that streamers assign meaning to themselves, and it shapes their attitudes, affect and emotional behavior to meet requirements of the work. Combining all of the above evidence, we argue that social support reinforces streamers’ positive aspects of the self through enhanced understanding and recognition of professional significance and value towards live streaming, in turn fosters a positive professional identity and thus influences their emotional labor strategies. Therefore, we propose the following hypothesis:

**H3a:** Professional identity mediates the relationship between social support and surface acting.

**H3b:** Professional identity mediates the relationship between social support and deep acting.

### The Moderated Effect of Emotional Intelligence

As we discussed above, streamers with low professional identity may not recognize the emotional rules of live streaming profession or lack a sense of self-identity towards their profession. But in order to meet the requirements, they will take a hidden or disguised way to express their emotions by surface acting. Emotional intelligence, as an ability of individuals to observe, recognize, manage and regulate their own emotions as well as those of others to solve problems (Abraham, 1999; Wong & Law, 2002), plays a crucial role in the process of emotional labor (Goleman, 1995). Live streamers with high emotional intelligence tend to enjoy a high degree of interaction with their coworkers and supervisors, which helps them to better understand and recognize the emotional rules of live streamer so as to reduce their faking emotions. In addition, individuals with high emotional intelligence are better equipped to manage and control their emotions to meet the requirements of organization than those with low emotional intelligence (Xu et al., 2020). Therefore, emotional intelligence should help to enhance the negative effects of professional identity on surface acting.

Besides, streamers with high professional identity are more likely to be intrinsically motivated to invest personal resources and thereby foster meaningful deep acting activities. As a kind of internal (emotional) ability, emotional intelligence can also promote employees’ faith, abilities to manage emotions and accumulation of other related individual resources (Wen et al., 2019). Research has shown that such emotional abilities can help individuals to adopt deep acting to replace surface acting in their work. For instance, Yin et al.(2013) found that teachers’ emotional intelligence has a significant impact on deep acting, but it is not a significant predictor of surface acting(Yin et al., 2013). The meta-analysis of Xu et al.(2020) also found a positive effect of emotional intelligence on deep acting and the negative effect of emotional intelligence on surface acting (Xu et al., 2020). Therefore, both professional identity and emotional intelligence can supplement the emotional resources consumed by emotional labor of streamers in the work. When individuals work in positions required with emotional labor, they would gradually consume their emotional, psychological and physical energies derived from their professional identity. If there is no alternative way to recovery their personal resources, the commitment to values and practices of their profession may be the important way to be motivated and avoid resource exhaustion. However, if an individual has other inner resources or emotional abilities like emotional intelligence, the role of alleviating resource exhaustion resulted from professional identity will be substituted, which in turn reduce the positive effect of professional identity on deep acting. In other words, emotional intelligence can function as an important inner resources to emotional labor and counteract on the effect of professional identity, thereby negatively moderate the positive relationship between professional identity and deep acting.

**H4a:** Emotional intelligence moderates the negative relationship between professional identity and surface acting, in that the higher the streamers’ emotional intelligence, the stronger the negative relationship between professional identity and surface acting.
**H4b:** Emotional intelligence moderates the positive relationship between professional identity and deep acting, in that the higher the streamers’ emotional intelligence, the weaker the positive relationship between professional identity and deep acting.

**The Moderated Mediation Effect of Emotional Intelligence**

The above hypotheses of 3a, 3b, 4a and 4b reveal that professional identity mediates the relationship between social support and surface acting/deep acting, and emotional intelligence moderates the impact of professional identity on surface acting/deep acting. As the moderation effect of emotional intelligence is integrated it into the indirect path of social support and emotional labor, it further reveals the moderated mediation effects of emotional intelligence in our proposed model. Specifically, emotional intelligence moderates the indirect effects of social support on surface acting/deep acting through professional identity, by changing the relationship between professional identity and surface acting/deep acting. Therefore, we propose the following hypothesis:

**H5a:** The indirect effect of social support on surface acting through professional identity is moderated by emotional intelligence, such that the indirect effect is stronger at high levels of emotional intelligence.

**H5b:** The indirect effect of social support on deep acting through professional identity is moderated by emotional intelligence, such that the indirect effect is weaker at high levels of emotional intelligence.

**RESEARCH METHODS**

**Sample and Procedures**

Located in most prosperous coastal regions, Zhejiang, Jiangsu, Guangdong, Liaoning province have developed a large number of living streaming platforms and enterprises. The local municipal governments make great effort in promoting the development of living streaming industries in the regional economy. Therefore, we collected data from 32 e-commerce live streaming companies located in Zhejiang, Jiangsu, Guangdong and Liaoning provinces. These e-commerce live streaming companies had on-line stores on Taobao Live, Douyin and other e-commerce live streaming platforms in order to reach as many potential customers as possible. With the assistance of surveyed company, we randomly selected 370 live streamers from 64 workgroups in 33 live streaming enterprises and distributed the questionnaire through social media platforms (such as Wechat) and email. All participants were informed with a declaration of confidentiality in advance, promising that the survey would be used only for academic research. By the end of the survey period, 355 questionnaires were recovered and 24 questionnaires were excluded due to excessive missing data. Our final sample comprised 331 live streamers with a response rate of 93.23%, the size of which ensured a good reliability of the study (Bakker et al., 2012). Due to the nature of live streaming industry, the study’s sample predominantly comprised females (66.77%) and was characterized by young people aged below 31 years (78.85%). The mean tenure in live streaming industry was 2.34 years (SD =0.91) and the education level of participants were high school or below (33.53%) and technical school diploma (46.83%), bachelor and above(19.64%).

**Variable Measurement**

The measurements of this research include social support, professional identity, emotional intelligence, and emotional labor. We design our questionnaire using existing scales which are translated from English into Chinese after a back-translation process to avoid cultural bias. Further, as the respondents are e-commerce live streamers, we followed the way of prior studies to modify some wording to ensure the applicability of e-commerce live streaming context(Sila, 2019; Sohaib et al., 2019; Zhang
The questionnaire items regarding social support are measured on a seven-point Likert scale ranging from “1” (strongly disagree) to “7” (strongly agree), while the remaining variables are measured by five-point Likert scales ranging from “1” (strongly disagree) to “5” (strongly agree).

1. **Social support (SS):** It is measured using 12 items from Perceived Social Support Scale (PSSS) adapted by Zimet et al. (1988) (Zimet et al., 1988). Sample items include: “There is a special person who is around when I am in need”, “There is a special person with whom I can share my joys and sorrows”, “My family really tries to help me”. (α=0.94). The Cronbach alpha coefficient of scale is 0.94.

2. **Professional identity (PI):** It measures the level of identification of an individual with his profession. We adapt Mael et al.’s (1992) Professional Identity Scale (PIS) (Lui et al., 2001) and substitute the word “profession” for the word “live streamer profession” in scale items. This scale contains 6 items. Two example items are: “When someone criticizes this live streamer profession, it feels like a personal insult”, and “When I talk about this live streamer profession, I usually say ‘we’ rather than ‘they’” (α=0.89). The Cronbach alpha coefficient of new scale is 0.89.

3. **Emotional intelligence (EI):** To measure emotional intelligence of live streamers, we use Law et al. (2004) Emotional Intelligence Measurement Questionnaire (WLEIS) (Law et al., 2004). A total of 16 items are included, some example of which are: “I have good understanding of the emotions of people around me”, and “I am a good observer of others’ emotions” (α=0.94). The Cronbach alpha coefficient is 0.94.

4. **Surface acting (SA) and deep acting (DA):** Surface acting (SA) and deep acting (DA) are measured using the Affective Labor Scale (ALS) from Grandey (2003) (Grandey, 2003), 5-item scale for surface acting (SA) and 6-item scale for deep acting (DA). On a 5-point scale ranging from very slightly or not at all to very frequently, respondents are required to indicate the extent to which the items describe them at work. A sample item for surface acting is “Just pretend to have the emotions I need to display for my job” (α=0.90). A sample item for deep acting is “Work hard to feel the emotions that I need to show to others” (α=0.90).

5. **Control variables:** Since previous studies suggest that the employees’ demographic background may affect emotional labor (Zhang et al., 2018), our paper also control for gender (1= male; 0= female), age (years), industry tenure (number of years in live streaming industry) and education (3 = bachelor and above, 2 = technical school diploma, 1 = high school or below).

**RESEARCH RESULTS**

**Confirmatory Factor Analysis and Common Method Bias**

This study uses Mplus 7.0 conduct CFA on five variables: social support (SS), professional identity (PI), emotional intelligence (EI), surface acting (SA), and deep acting (DA). As shown in Table 1, the five-factor structure of Model 1 fits the data best in fit indexes among Models 1-7, with χ²/df=1.14, RMSEA=0.02, CFI=0.98, TLI=0.99, and SRMR=0.04. These results suggest the scale used in this study has a good distinguishing validity and the five constructs capture distinctiveness as expected.

Since the data for both independent and dependent variables comes from the same respondent, it may raise concerns of common method variance in our paper. We adopt two statistical techniques to verify whether there is possible common method variance problem. First of all, this study use the Harman’s single factor test to verify whether the common method bias is high. The single-factor model (Model 7 in Table 1) shows an unsatisfactory fitting index (χ²/df=6.55, RMSEA=0.13, CFI=0.41, TLI=0.38, SRMR=0.19), indicating that the common method variance in this study is not serious. Furthermore, the unmeasurable latent factor model is also used to further test the common method bias. It is shown that the fitting index of unmeasurable latent factor model (Model 2) is χ²/df=1.14,
RMSEA=0.02, CFI=0.99, TLI=0.99, SRMR=0.04, achieving no significant improvement compared with the five-factor model (Model 1). So the common method bias in this study is not serious.

**Descriptive Statistical Analysis**

Table 2 shows the mean, standard deviation and correlations between the control variables, social support, professional identity, emotional intelligence, surface acting and deep acting. The results show social support is positively related to professional identity (r=0.48, p <0.01) and deep acting (r=0.53, p <0.01), and negatively related to surface acting (r= -0.46, p <0.01). Professional identity is found to be positively related to emotion intelligence (r=0.16, p <0.01) and deep acting (r=0.53, p <0.01), and negatively related to surface acting (r= -0.44, p <0.01).

**The Main Effect of Social Support and Mediating Effect of Professional Identity**

The main effect of social support (SS) and mediating role of professional identity (PI) is tested by path analysis and bootstrap methods using the process v3.5. The results are reported in Table 3 and show:

1. The path coefficient of social support→surface acting (β= -0.19, p<0.001) indicates that social support has significant negative effects on surface acting. The path coefficient of social support→deep acting (β=0.20, p<0.001) indicates that social support has significant positive effects on deep acting. Therefore, Hypotheses 1a and 1b are supported.
2. The path coefficient of professional identity→surface acting (β= -0.29, p <0.001) indicates that professional identity significantly negatively affects the surface acting. The path coefficient of professional identity→deep acting (β=0.39, p <0.001) indicates that professional identity has significant positive effects on deep acting. Overall, these results support Hypotheses 2a and 2b.

3. Moreover, the indirect effect of social support on surface acting via professional identity is significant (β= -0.08, p <0.001), with 95% confidence interval (CI)= [-0.11,-0.05], and the indirect effect of social support on deep acting via professional identity is significant (β=0.11, p <0.001), with 95% confidence interval (CI)= [0.07,0.15]. Since all confidence intervals exclude zero, assuming that Hypothesis 3a and 3b are supported.

**The Moderated Effects of Emotional Intelligence (EI)**

The interaction term of professional identity and emotional intelligence on surface acting is significant (β= -0.40, p<0.001), indicating that emotional intelligence significantly moderates the relationship between professional identity and surface acting. The interaction term of professional identity and emotional intelligence on deep acting is also significant (β= -0.34, p <0.001), indicating that emotional intelligence significantly moderates the relationship between professional identity and deep acting.

This paper further examines the moderation effect of emotional intelligence using simple slope plot in Figure 2 and Figure 3. As emotional intelligence improves, the negative impact of professional identity on surface acting decreases, and the positive impact of professional identity on deep acting increases.

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**Table 3. The mediation effects of professional identity (PI)**

| Variables       | Professional identity (PI) | Surface acting (SA) | Deep acting (DA) |
|-----------------|----------------------------|---------------------|-----------------|
| Social support (SS) | 0.27***                    | -0.19***            | 0.20***         |
| Professional identity (PI) | -0.29***                  | 0.39***            |                 |

**The Dual Paths**

| The Dual Paths | Mediation effect | 95% CI of indirect effect, 5,000 bootstrap sampling |
|----------------|------------------|-----------------------------------------------------|
| SS®PI®SA       | -0.08*** (0.02)  | CI=[-0.11,-0.05]                                    |
| SS®PI®DA       | 0.11*** (0.02)   | CI=[0.07,0.15]                                      |

Note: N=331. * p < .05, ** p < .01, *** p < .001.

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*Figure 1. Path coefficient diagram*
identity on surface acting is enhanced ($\beta_{low} = -0.135$, $t = -1.960$, $p < 0.05$; $\beta_{high} = -0.744$, $t = -10.770$, $p < 0.001$), and Figure 2 shows that the linear slope at a high emotional intelligence level is greater than that at a low emotional intelligence level. Therefore, it confirms that emotional intelligence positively moderates the negative relationship between professional identity and surface acting. In Figure 3, it is found that as emotional intelligence improves, the positive impact of professional identity on deep acting is diminished ($\beta_{low} = 0.858$, $t = 12.966$, $p < 0.001$; $\beta_{high} = 0.328$, $t = 4.961$, $p < 0.001$), and the slope at a low emotional intelligence level is greater than that at a high emotional intelligence level. Therefore, emotional intelligence negatively moderates the positive relationship between professional identity and deep acting. Hypothesis 4a and 4b are supported.

**The Moderated Mediation Effects of Emotional Intelligence (EI)**

To gain a deep insight of how the above indirect effects differ by the levels of emotional intelligence (EI), we adopt the bootstrapping procedures to quantify the indirect effects at lower (mean-1SD) and higher (mean+1SD) levels of emotional intelligence (EI) by using process v3.5. As shown in Table 4,
the negative indirect effect in Path 1 (Social support→Professional identity→Surface acting) is stronger at higher (γ=-0.157, 95% CI = [-0.203,-0.115]) than lower (γ =0.001, 95% CI = [-0.041,0.045]) levels of emotional intelligence (EI). An additional test shows a significant differences between groups (Δγ= -0.158, CI =[-0.223,-0.099]), indicating that Hypotheses 5a is supported. Similarly, the positive indirect effect in Path 2 (Social support→Professional identity→Deep acting) is weaker at higher (γ=0.037, 95% CI = [0.002,0.075]) than lower (γ=0.189, 95% CI = [0.144,0.238]) levels of emotional intelligence (EI). An additional test confirmed that the difference between these two indirect effects is statistically significant (Δγ = -0.152, CI = [-0.206,-0.102]). Therefore, Hypotheses 5b is also supported.

### DISCUSSION AND CONCLUSION

Drawing on the COR theory, this study examines the mechanism of how social support has an impact on the emotional labor using a questionnaire survey in e-commerce live streaming industry. The main findings of study conclude as follows: First, social support and professional identity has a negative effect on surface acting, and simultaneously, a positive effect on deep acting. Second, on the mediating effect of professional identity, we find that social support weakens (enhances) live streamers’ surface acting (deep acting) by stimulating their professional identity. Third, emotional intelligence can enhance the negative indirect effect of social support on surface acting through professional identity. Our findings also indicate that emotional intelligence can weaken the positive indirect effect of social support on deep acting through professional identity. Compared with previous studies, our study not only emphasizes the direct effect of social support of live streamers on their emotional labor, but also examine the mediate effect of professional identity and moderating effect of emotional intelligence on the above relationship. These findings have important theoretical contribution to the existing emotional labor literature and have important managerial implication for e-commerce live streaming industry.

Our empirical findings confirm that social support will have a significant effect on both surface acting and deep acting but in opposite directions. There is a consensus in emotional labor literature that social support is positively related to deep acting (Lam & Chen, 2012), however several studies indicate that employees engage in surface acting for complicated reasons and the relationship between social support and surface acting is also inconsistent and even conflicted (Xu et al., 2020). For example, Xu et al. (2020) argue that employees who get more social support may engage in surface acting because the supportive environment may make them feel free from punishment even their faked smile is detected by customers (Xu et al., 2020). Using e-commerce
live streaming as a new context, our paper finds social support may reduce surface acting of live streamers, which is opposite with the arguments of Xu et al. (2020). One of the possible reasons is that supportive environment may also enhance the identification of streamers’ profession and recognize the meaning of work. Therefore, future studies may examine these conflicting arguments using more fined empirical research design.

Prior studies emphasize that internal energies (e.g., emotional intelligence, organizational commitment or motivation) can be used to cope with stress from emotional labor (Lam & Chen, 2012; Xu et al., 2020; Yin et al., 2013). Conforming to the COR theory, our study considers this point further by proposing that employees may increase deep acting or reduce surface acting when they understand and recognize the professional meaning and work-related identities. Specifically, gaining a high faith towards professional identity can help to better recognize emotional rules of live streamers and commit to their work so as to reduce live streamers’ faking emotions. More importantly, we find the mediating effect of professional identity on the relationship between social support and emotional labor. It finds that social support can influence streamers’ perception towards professional identity of live streaming and can thereby exert an effect on emotional labor by increasing deep acting and reducing surface acting. This finding may indicate that the influence of professional identity occurs before that of social support and professional identity is a more invisible but deeper factor affecting emotional labor strategies of live streamers.

Furthermore, our paper highlights the moderation effect of emotional intelligence on the relationship between social support and emotional labor. Previous studies indicate that emotional intelligence, as an important personal resources, can help individuals handle negative emotions and facilitate employees’ emotional labor (Chen et al., 2019; Grandey & Melloy, 2017). For example, several studies find that emotionally intelligent individuals normally tend to perform deep acting and reduce surface acting (Kim et al., 2012; Wen et al., 2019; Yin et al., 2013). However, there is limited research that has investigated emotional intelligence from an interaction perspective where emotional intelligence acts an individual characteristics that enable live streamers’ social support that regulates the emotional strategies to have a stronger or weaker effect. It could be one of the possible reasons for inconsistent findings in the relationship between social support and emotional labor strategies because of neglecting some important contextual variables such as emotional intelligence (Xu et al., 2020). This paper finds emotional intelligence can enhance the mediating effect of professional identity on the relationship between social support and surface acting but may reduce the mediating effect of professional identity on the relationship between social support and deep acting. Our findings suggest even if employees have not yet established a high level of professional identity, higher emotional intelligence helps them to reduce surface acting by identifying, understanding their own and audiences’ emotions, and adjusting to the required emotional rules. However, although both emotional intelligence and professional identity may foster meaningful deep acting activities (Ashforth & Humphrey, 1993; Wen et al., 2019), but these two kind of internal resources of individuals may has a substitution effect with each other on providing sufficient emotional abilities and resources to engage in deep acting.

Our study has a number of limitations that are necessary to be considered in future studies. First, because this study selects e-commerce live streamers in China as our samples, the majority of respondents are female aged below 30, which limits the generalizability of our results. Since emotional labor exists in various service industries, whether the findings of this paper is applicable to other service industries and other regions or not needs to be further investigated in future studies. Second, we only use live streamers’ self-reported and cross-sectional data, which may be subject to common method bias. In future studies, it may be necessary to use longitudinal studies, experimental designs or collect data in time lagged way. Third, the influence of social support on emotional labor may also be mediated by other
factors. In this paper, professional identity is the key exploratory variable. Future research may explore other potential mediators of the influence of social support on live streamers’ surface acting and deep acting. Finally, we only investigate emotional intelligence as potential moderator, and more research is needed to explore the moderating effect of other factors such as emotion regulation and self-efficacy (Deng et al., 2017).

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**ENDNOTES**

1  https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/its-showtime-how-live-commerce-is-transforming-the-shopping-experience

2  https://www.iresearch.com.cn/Detail/report?id=3841&isfree=0

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