The Influence of Secure Emotional Expression on Team Effectiveness

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Abstract

The present study examined the relationship between group effectiveness and secure emotional expression over the course of a 10 week period. The participants consisted of 12 college students who were enrolled in a senior seminar on teamwork. Participants worked in two groups of six and participated in a group meeting each week that consisted of a check-in, activity, and a debriefing. After each group meeting, participants completed surveys. These surveys contained questions from the Therapeutic Factors Inventory (TFI) and a book (Johnson & Johnson, 2009) that included exercises on group effectiveness. The hypothesis for this study was that group effectiveness and secure emotional expression would have a significant positive correlation over time. Results from the surveys did not support the hypothesis.

Secure Emotional Expression and Team Effectiveness

Research on team effectiveness has recently become more prevalent due to the increased emphasis of teamwork in organizations and school-based activities (Druskat & Wolff, 1999) Factors that have often been correlated with team effectiveness include communication, trust, group size, and cohesion. Cohesion, a factor often correlated with team effectiveness, can increase through secure emotional expression due to meaningful disclosure and open communication (Joyce, MacNair-Semand, Tasca, & Ogrodniczuk, 2011). One factor that has not been fully examined in recent research and is believed to have an influence on team effectiveness is secure emotional expression. Though secure emotional expression has not been thoroughly examined in research (Kraich, 2013), there is a large amount of research on emotional intelligence. Several researchers propose that emotional intelligence, an individual's ability to be aware of and manage emotions, plays a significant role in team performance (Troth, Jordan, Lawrence, & Tse, 2011). Since most of the literature relating to emotions and team effectiveness has looked at emotional intelligence, this is a construct that will relate to the current study. The current study will examine whether secure emotional expression will positively impact team effectiveness.

Wagstaff & Weston (2014) examined emotions in a team of 12 people in the military work force during a two month mountaineering expedition to Antarctica. The sample was predominantly male. Strategies used to manage emotions, the perceived effectiveness of the strategies and the impact of the strategies on team dynamics and performance were studied. Participants completed standardized checklists in daily diaries throughout the two month expedition. The questionnaires within the diary included concepts from the Cognitive Emotion Regulation Questionnaire. Diaries were written at the end of each day. A pre and post expedition

interview was also conducted. The interviews highlighted participants' expectations and reflections, giving further insight into individual experiences. Quantitative data extracted from the diaries were analyzed using Pearson's correlation, t-tests, and a mediated regressions analysis. Information from the daily diary entry data indicated that the participants' emotional experience impacted perceptions of task and social cohesion and team performance. This article relates to the current study because the findings support the importance of emotion on interpersonal outcomes, and in turn, have an effect on perceived team effectiveness.

In a study conducted by Kivlighan & Angelone (1992), variables that influence participants' perception of group climate were examined. The operational definition of group climate is the participants' perception of the group atmosphere. Students (N = 61) from a Midwestern university participated in the study. All participants were enrolled in a course about group processes. Random assignment was used to divide the participants into groups of seven or eight members. Groups were required to meet for an hour and a half twice a week for a duration of 10 weeks. The measures employed in this study included the Inventory of Interpersonal Problems (IIP) and the Group Climate Questionnaire- Short Form (GSQ-S). The GSQ-S was filled out after each group meeting, while the IIP was completed at the beginning of the study. Interpersonal theory suggests that people will perceive their environment (group climate) in ways that reflect their interpersonal problems. Therefore, it was theorized that participants who had a dominant view of themselves would be more likely to view submissive behavior being supported in the group climate. It was found that participants saw the group in a different light depending on their individual interpersonal problems. This relates to the current study because depending on an individual's interpersonal problems and how they view the group, secure emotional expression could be affected positively or negatively.

In 2006, researchers Jordan and Ashkanasy explored the relationship between emotional intelligence, emotional self-awareness, and team effectiveness as an indicator of team performance. This study included 140 Australian students with an age range from 17 to 46 (*M* = 20.5). Participants were predominantly female. They were randomly assigned to 35 teams. The duration of the experiment was 10 weeks. During these 10 weeks, teams worked together using a problem based learning model, with meetings lasting between two and three hours. Teams submitted reports of their team meetings on a weekly basis. These reports included information pertaining to team member interactions, team processes, and team effectiveness. The Workgroup Emotional Profile was used to measure collective emotional intelligence. A self-report version and peer report version of this measure were also used to address emotional intelligence. Team effectiveness data was analyzed through the use of the teams' regular meeting reports. A relationship was not found between self-assessed measures of emotional intelligence and team effectiveness. However, a weak relationship was found between peer assessed measures of emotional intelligence and team effectiveness. This is relevant to the current research because it measures secure emotional expression through the more concrete construct of emotional intelligence.

In a study conducted by Jordan & Troth (2004), 350 participants were randomly assigned to 109 teams. The mean size of the teams was three, with a wide age range (*M* = 23.05). Teams were administered The Work Group Emotional Intelligence Profile to assess their emotional intelligence. Emotional intelligence involves management of one's own emotions and insight into others emotional states. The researchers predicted that teams with higher levels of emotional intelligence would perform better on a problem-solving task than teams with lower levels of emotional intelligence. The premise behind this hypothesis was the idea that high

emotional intelligence facilitates team members to manage and be aware of their own emotions and emotions of other team members. The ability to manage emotions was believed to lead to better performance and conflict resolution. The task which the teams participated in was a survival situation exercise. Teams collectively had to rank 15 items in order of their importance to survival. The quality of the teams' decision was derived from comparing the team scores to expert scores from survival experts. Higher scores are correlated with deviation from the experts' scores which indicates a poorer performance. The hypothesis was confirmed. This relates to the current study because of the use of a task to evaluate team effectiveness.

Troth, Jordan, Lawrence, & Tse (2012) examined how team member's use of emotion related skills affect team and task performance. Operationally defined, emotional skills comprised of: awareness of emotions, using emotions in decision making, managing emotions, and acquiring emotional knowledge. A team member who is aware of his or her own emotions is more likely to recognize the appropriate emotions and intensity that a team interaction requires. This will promote the team relationship and impact team effectiveness. Disconnecting from emotions that are not useful to the task at hand can increase productivity and reduce conflict between members. A sample size of 567 undergraduate students was used to examine how emotion related skill affect team and task performance. Participants were required to form self-selected teams that had no interaction in prior projects or team related activities. The task for the participants involved delivering a persuasive presentation on a predetermined topic. The team was required to meet every week in class to work on the presentation. This occurred for a time period of eight weeks. Researchers hypothesized that team emotional awareness (individual and collective) skills would be positively related to team task performance. Through examination of partial bivariate correlation, it was revealed that team level (collective) emotional awareness

skills were positively related to task performance scores. The hypothesis was fully supported. This is of main concern to the current research because emotional skills as a construct may provide a more concrete way to measure secure emotional expression in team related tasks.

Previous literature suggests that secure emotional expression can influence team effectiveness. This study will evaluate the correlation through these variables. The hypothesis of the current study is that there will be a significant, positive correlation between secure emotional expression and team effectiveness over time.

Method

Participants

The 12 participants in this study were from a liberal arts college in the Southeast. They consisted of 10 females and two males, with an age range from 20 to 22 (M = 21). The participants were all Caucasian and in their final year of undergraduate education. All of the participants were psychology majors and enrolled in a seminar on teamwork. They were randomly assigned into two groups of six using the website random.org. The groups interacted through tasks for the remainder of the semester.

Instruments

Each week after completion of a group activity, group members were asked to fill out a survey individually regarding the weekly meeting. It uses an 11 point scale that ranges from 0-100 percent. The weekly survey included questions and statements from the Therapeutic Factors Inventory, as well as questions on team effectiveness (Johnson & Johnson, 2009), collective and self-efficacy and group climate. The specific statement from the weekly survey that pertains to the current study is: the members revealed sensitive personal information or feelings. This statement was rated on a Likert Scale ranging from one to seven.

The Therapeutic Factors Inventory (TFI) is a self-report measure by Joyce, MacNair-Semand, Tasca, & Ogrodniczuk (2011). It contains four different subscales: installation of hope, secure emotional expression, awareness of relational impact, and social learning. The subscale of Secure Emotional Expression was used to look into each group members' psychological well-being when expressing emotions. There were also statements in the Therapeutic Factors Inventory involving group climate, mindfulness, and collective and self-efficacy. The Therapeutic Factors Inventory was created to offer a comprehensive, empirically based measure to assess therapeutic factors in groups (Lese & MacNair, 1997). The factors included in the measure were based on Yalom's theory. Psychologists that specialized in group psychotherapy produced 174 items. These items were assessed through a seven point Likert scale. Therapeutic factors in this measure could be seen as distinct but could also correlate significantly with one another. The researchers' findings suggest that the Therapeutic Factors Inventory is a useful apparatus to assess group member's perceptions of these scales. In the survey given to the two teams, the secure emotional expression subscale was comprised of components such as: "members shared sensitive personal information and feelings".

In the survey, team effectiveness was measured through a set of exercises. The exercises on the cohesion subscale of team effectiveness in Johnson and Johnson's (2009) book were comprised of components such as: "Even though we have differences, our group feels secure to me". Team effectiveness, like secure emotional expression, also used a Likert Scale, with "1" correlating with strongly disagree and "7" correlating with strongly agree, participants rated the extent to which they concurred with the statements.

Procedure

Students participated in teamwork oriented tasks for 11 weeks beginning in August. The first week, each group generated three goals that pertained to how they expected the team members to perform throughout group activities. Twice a week, on Mondays and Wednesdays, the group came together for roughly an hour and fifteen minutes. The time was split into three segments: check-in, activity, and debrief. Check-in gives individual group members the opportunity to discuss each other's current status and mood. During the debriefing, team members use the allotted time to analyze their task performance, group dynamics, how well they complied with their group goals, and overall group progress. The three segments of group time are devised to make team members think beyond the task and work together. Both teams completed the same activities in separate rooms. The tasks often involved problem solving and occasionally involved physical activity. Tasks that occurred throughout team meetings helped construct team effectiveness and security in expressing emotions. After the task was completed, weekly surveys were filled out online individually. The weekly survey helped record the progress teams were making in these constructs. Responses to the statement of interest ("Even though we have differences, our group feels secure to me") were then collected and analyzed to examine the relationship between the variables.

Design

This study analyzed two dependent variables, secure emotional expression and team effectiveness. An effect size was calculated for each week (n = 10) to determine the relationship between secure emotional expression and team effectiveness. The data was analyzed through the software Statistical Package for Social Sciences (SPSS). A Pearson's r correlation was run to determine if there was a relationship between secure emotional expression and team effectiveness. The effect size used for this study is a part of the relationship family. This type of

effect size covers measures of association linking two or more variables (Ellis, 2010). The correlation coefficient (*r*) showed the strength and direction of the relationship between secure emotional expression and team effectiveness (Ellis, 2010). The correlation coefficient was squared in order to calculate an effect size for each week. The closer r^2 was to 1.00 or -1.00, the stronger the correlation.

Results

Data collection occurred at the end of the 10 week period. The raw data was restructured by the instructor prior to statistical computations. The restructured data allowed for greater organization and ease of conversion into the statistical software, SPSS. The determination of the appropriate test to run was addressed by the professor and assistance was given if needed.

A bivariate correlation was run through SPSS on the correlation between team effectiveness and secure emotional expression. An effect size was then calculated by squaring the Pearson Correlation. Relevant data (effect sizes, means, significance, sample size, and confidence intervals) are all displayed in Table 1. The 95% confidence intervals can also be viewed as a visual representation in Figure 1. It was hypothesized that overtime the relationship between secure emotional expression and team effectiveness would be stronger. However, data suggests that there was no clear pattern to the relationship. A visual representation of the effect size pattern is in Figure 2. Therefore, the results do not support the hypothesis that the correlation would grow stronger over time. A strong effect size is equal to or greater than 0.64 (Ferguson, 2009). Two effect sizes in our data are considered strong: week four ($r^2 = 0.74$) and week nine ($r^2 = 0.73$). A moderate effect size is anything greater than or equal to 0.25 and less than 0.64 (Ferguson, 2009). Week one ($r^2 = 0.28$) and week seven ($r^2 = 0.44$) are both moderate effect sizes. The majority of the effect sizes in the data set are weak ($r^2 < 0.25$). Weeks two ($r^2 =$

0.21), three($r^2 = 0.09$), five ($r^2 = 0.18$), six($r^2 = 0.12$), eight($r^2 = 0.03$), and 10 ($r^2 = 0.15$) all display weak effect sizes.

Unlike what was originally hypothesized, there is not a significant, positive correlation between group effectiveness and secure emotional expression. There is no clear pattern in the effect sizes between the two variables that were plotted for each week. Through the statistical analysis, no significance is found.

Table 1. Means, Significance, Effect Sizes, and Confidence Intervals Group Effectiveness and Secure Emotional Expression

Weeks	Group Effectiveness Mean	Secure emotional expression Mean	Significance (2-tailed)	N	R2	95%CI
1	88.79	5.12	.094	11	.28	[-0.06, 0.62]
2	81.67	4.87	.130	12	.21	[-0.11, 0.53]
3	89.39	4.78	.359	11	.09	[-0.16, 0.34]
4	93.70	4.98	.839	8	.74	[0.52, 0.96]
5	87.00	4.73	.907	10	.18	[-0.14, 0.51]
6	89.00	4.87	.931	9	.12	[-0.17, 0.40]
7	62.22	4.41	.05	9	.44	[0.09, 0.79]
8	88.89	4.95	.640	9	.03	[-0.13, 0.20]
9	84.76	5.29	.014	7	.73	[0.50, 0.97]
10	93.00	5.46	.267	10	.15	[-0.15, 0.46]

Figure 1. Visual Representation of Confidence Intervals between Group Effectiveness and Secure Emotional Expression

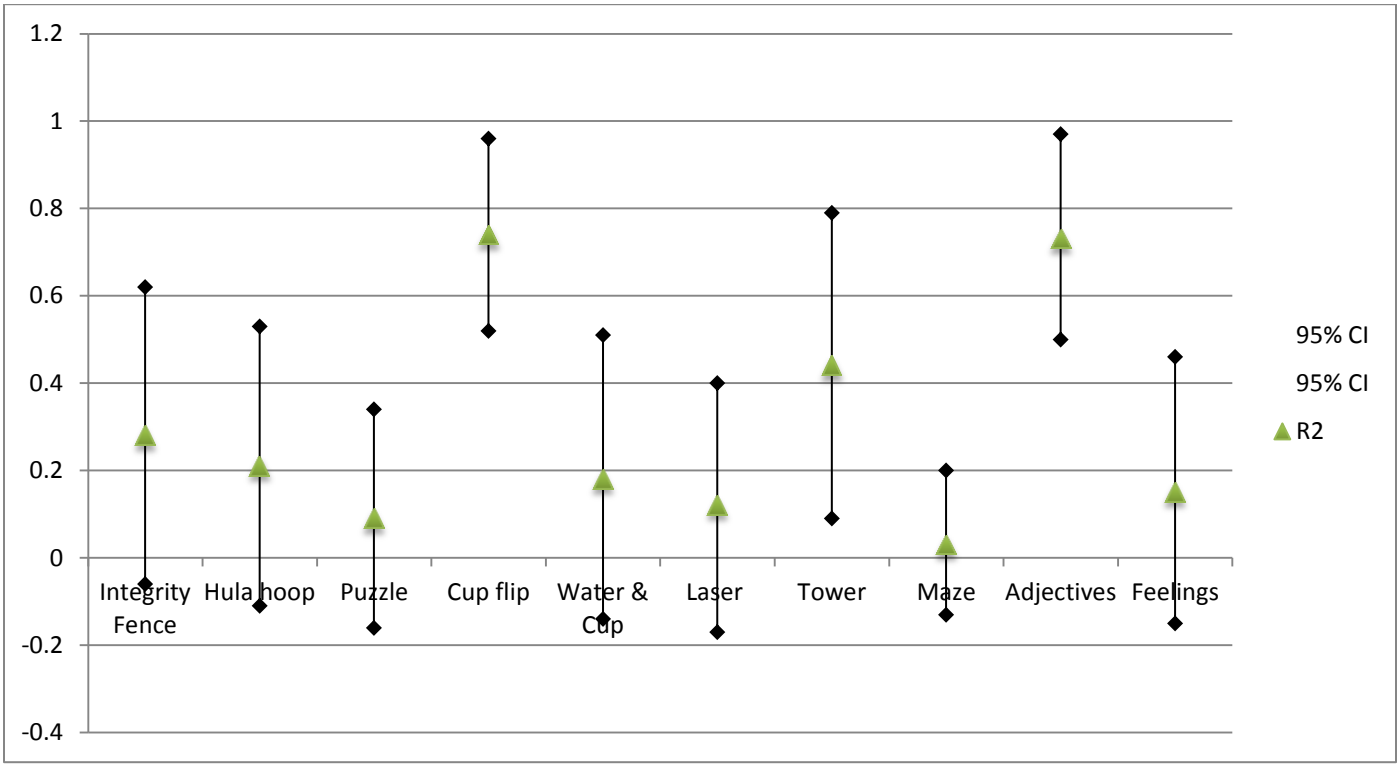
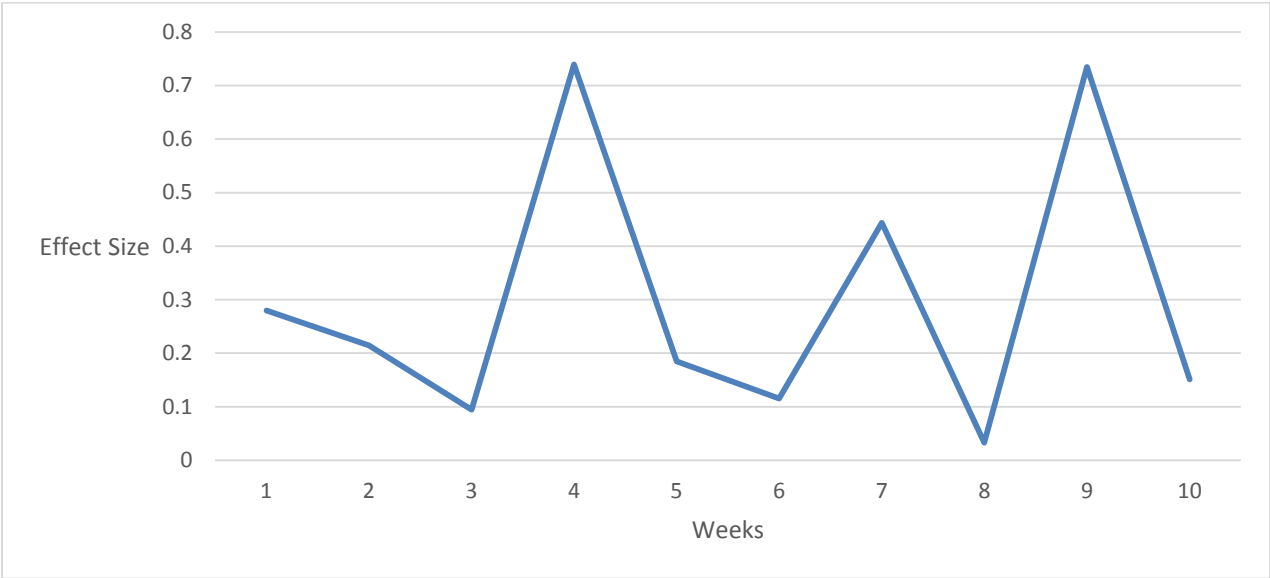


Figure 2. Visual Representation of Effect Size Over Time.



Discussion

The goal of the current study is to assess if there is a positive correlation between secure emotional expression and team effectiveness over time. This was determined by calculating an effect size from the Pearson Correlation and mapping out the resulting pattern between the two variables (team effectiveness and secure emotional expression) on a weekly basis. These findings indicate that there is no clear pattern in effect sizes over the duration of the semester. The lack of a significant, positive correlation over time disproves the hypothesis. Results of the current study suggest that when team effectiveness and secure emotional expression are correlated each week, there is no significance between the variables.

To speculate on the finding that weeks four and nine had the strongest effect sizes, weekly posts (Discuss, Assess, Plan; DAP note) from group members were examined. These DAP notes are notably similar to the weekly reports in a study conducted by Jordan and Ashkanasy (2006). The weekly reports included information pertaining to team interactions, processes, and overall cohesion. Investigation of the DAP note will give insight into why these weeks both demonstrated high correlation for team effectiveness and secure emotional expression. The premise behind the DAP notes bringing insight can be attributed to the past research by Wagstaff & Weston (2014). Information was extracted from daily diary entry data which determined that the participants' emotional involvement had an effect on their perceptions of task and social cohesion, in addition to team performance. Evidence in DAP note five (September 20, 2014 10:21 AM) suggests that enhanced communication made the correlation between both variables stronger. A participant stated that planning prior to the task made a difference in the overall team performance. DAP note five correlated with week four which was the cup-flip task. A participant mentioned in DAP note 10 (October 26, 2014 10:02 PM) that she

felt the team cohesion had strengthened because of the bonding that had occurred. DAP note 10 correlated with week nine which was the adjective activity. The evidence from DAP note five and 10 challenge the quantitative results retrieved. The pattern the DAP notes illustrate seems to be indicative of progress, and thus a positive correlation over time. However, once one looks at the DAP note from week eight, it becomes clear that there is no apparent pattern in the correlation between team effectiveness and secure emotional expression. A participant mentioned in DAP note 9 (October 16, 2014 10:36 PM) that the lack of communication in the maze activity had a negative impact on teamwork. Overall, the DAP notes seemed to be reflective of the effect sizes and gave insight into group processes such as team effectiveness and secure emotional expression.

There is not practical significance found in the results. The correlational data that was obtained had significant weaknesses and could not be generalized to the population because of the unrepresentative sample. This was one limitation to the current study. The small sample size (N = 12) causes this study to have low external validity. An overwhelming majority of females in the sample size also contributed to this study being less generalizable to the overall population. An additional reason that this study is not of practical significance is because of the use of a instructor-created survey. Since this is not a standard measure, it is difficult to compare this study to other studies similar to it.

In addition to a small sample size, there are other limitations that could have influenced the results. The most significant limitation is the variance in the N value weekly. This resulted in incomplete data sets and therefore may have skewed data. The use of a survey also creates further limitations. A bias that is often present with the utilization of a survey is social desirability bias. Participants in this study may have skewed the data by rating their specific

groups on the higher end of the scale to give a more positive impression of the group and themselves. The lack of clear operational definitions of secure emotional expression and group effectiveness may have contributed to a lack of understanding about the specific question or statement that was addressed. Each participant may have had a different understanding of the variables than what was originally intended and unknowingly answered the question inaccurately.

Future research should consider the use of a standardized measure to make this research more generalizable to the population and easier to compare to other studies. Though a significant, positive correlation was not found, future research should consider testing this hypothesis with a larger sample size. This may contribute to a significant correlation and give insight into group effectiveness and secure emotional expression overtime. The time period in which the correlation is studied could be expanded past 10 weeks to gather a larger amount of data. Another direction that future research could go in would involve the means for secure emotional expression and team effectiveness. These means would be taken on a weekly basis and examined to conclude how they change overtime. This would give greater insight in the gradual changes of both variables. To the researchers' knowledge, this is the first study done on secure emotional expression as related to team effectiveness. The frequent use of groups in both schools and workplaces can benefit from research on this topic.

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