The Perceptions and Attitudes of Undergraduate Healthcare Sciences Students of Feedback: A Qualitative Study

Lama S. Alfehaid\textsuperscript{a,}\textsuperscript{*,}\ Amenah Qotineh\textsuperscript{a}, Nada Alsuehebany\textsuperscript{a}, Shmylan Alharbi\textsuperscript{a,}\textsuperscript{b}, Hind Almodaimegh\textsuperscript{a,}\textsuperscript{b}

\textsuperscript{a}College of Pharmacy, King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia.

\textsuperscript{b}King Abdulaziz Medical City, Riyadh, Saudi Arabia

Received 17 August 2017; received in revised form 10 February 2018; accepted 14 March 2018

Abstract

\textit{Purpose:} Regardless of the importance of feedback, many students are dissatisfied with the feedback they receive. This study was conducted to evaluate undergraduate healthcare sciences students’ perceptions and attitudes toward, and their lived experiences of feedback.

\textit{Methods:} To evaluate undergraduate healthcare sciences students' perceptions and attitudes toward feedback using a descriptive approach. A Phenomenological qualitative study. Healthcare sciences students were invited to participate in semi-structured focus groups interviews; open-ended questions were developed per the study objectives and the knowledge deficit to guide the discussion.

\textit{Results:} Five major themes were apparent during the discussion regarding the perceptions and attitudes of healthcare sciences students towards feedback. Students highly regard honest and continuous feedback before grading or final assessment. Students preferred receiving feedback as a private dialogue that contains balanced positive comments and points for improvements. Comparing student performance with others or providing subjective and unspecific feedback were the most common reasons for students to disregard feedback. The value of the level of faculty or years of experience was controversial among students. Limited time, poor communication skills and unavailability of a faculty member were perceived as major barriers for constructive feedback. Students recommended both peer feedback and mutual feedback between students and faculty members to be applied continuously.

\textit{Conclusion:} This study demonstrates that healthcare sciences students need continuous constructive feedback. Providing mutual and peer feedback as a dialogue considering balanced positive comments and points for improvement should be implemented during the educational process. Training for both faculty members and students is highly recommended.

© 2018 King Saud bin Abdulaziz University for Health Sciences. Production and Hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Keywords: Qualitative study; Feedback; Health-care students; Focus groups
1. Introduction

The early concept of feedback was developed as information that a system requires making modifications in reaching a goal, which was valued by rocket engineers in the 1940s and used in several other fields. In healthcare-related programs, students require continuous feedback, as the education process is diverse, including practical laboratory work, clinical practice and direct contact with patients that require immediate effective feedback. Effective feedback in medical education occurs when students are provided with insight into their performance and the subsequent consequences. Feedback is to provide students with information to reduce the deficit between their current and desired performance. An environment that lacks constructive feedback results in poor performance, since the approach to development is not recognized.

Providing and receiving feedback requires skill of both students and faculty members. The techniques and processes in which individuals understand feedback is basic to ensure effective learning. Several educational institutions apply feedback in their program, however, a good feedback practice should be implemented to ensure the effectiveness of feedback. Nicol and MacFarlane-Dick have formed The Seven Principles of good feedback practice which address a large scope of feedback self-regulation and help to improve feedback practices.

Regardless of the importance of feedback, many students are frequently dissatisfied with the feedback they receive. A cross-sectional survey was conducted in the United Kingdom (UK) to assess pharmacy students’ opinion and satisfaction with feedback related to their performance. Of 343 retrieved surveys, 98% of the students supported the importance of feedback with 65% being dissatisfied with the feedback they received. More than 85% of the students indicated that, at the completion of every component of the work, they should receive feedback and most students (90%) indicated that feedback was beneficial when their performance was low. It should be noted that 70% of the students indicated that feedback was only helpful when received promptly. A randomized controlled trial was conducted in the United States of America (USA) in 2006 with 33 participants to assess the learning effects and students’ perceptions about feedback versus general compliments. The average performance of the group who were provided with tailored feedback improved significantly (21.98 compared to 15.87, \( p\text{-value} < 0.001 \)) while there was no significant improvement in the performance of the students who were provided with compliments only. In Saudi Arabia, a quantitative cross-sectional study was conducted targeting undergraduate medical students between April to June 2010. From 186 respondents, almost half (45%) indicated the existence of obstacles that may affect the process of feedback in their institution. On a positive note, most students (86%) would use feedback if it were provided consistently.

In more recent prospective descriptive cohort study, that studied the perception of Interprofessional peer feedback of students from multiple healthcare disciplines, students positively perceived the feedback as helpful tool among themselves for improvement of performance sake. Furthermore, physical therapy students rated the feedback significantly more positive than medicine, nursing, and dentistry students. Dental students rated the feedback as significantly less positive than other disciplines.

The purpose of the current study was to evaluate undergraduate healthcare sciences students’ perceptions and attitudes toward, and their lived experiences of feedback using a descriptive approach with semi-structured focus group interviews to achieve a deep understanding of the topic. Also, to improve the quality of feedback by identifying the difficulties students experience when receiving or providing feedback and to develop a tailored feedback system supported by students.

2. Methods

This study followed a phenomenological qualitative approach. Researchers select this method when they desire to describe the perceptions and attitudes people involved with the issue being studied. This design was followed in this study to capture the undergraduate healthcare sciences students’ experiences and reaction to feedback received from faculty members. Semi-structured focus groups interviews were used to provide a deep understanding of the topic and to facilitate each participant to share their ideas. After a comprehensive literature review, a set of open-ended questions was developed according to the study objectives and knowledge deficit to guide the discussion. A pilot test with four participants was conducted to ensure the usefulness of the method as well as comprehensiveness and consistence of the developed questions. Ethical approval was obtained from the King Abdullah
International Medical Research Center (KAIMRC) in October 2016. The study was conducted between October 2016 and April 2017. All participants signed a consent form, which declared student freedom to withdraw from the study at any point in time. Additionally, confidentiality of personal data and security of the recorded data was guaranteed. The participants were offered access to the results of the study upon request.

Maximum variation sampling was applied, undergraduate healthcare sciences students from different colleges were recruited through the Student Affairs Office at each college. Researchers contacted the student affair officers to invite 5–9 students from different levels of study to participate in focus group discussions after being informed of the study objectives via email. We ensured that the researchers were not involved in the selection of the participants and selection was based on the acceptance of the students to the invitation. The moderators of the focus group sessions did not know any of the participants to minimize bias preventing students' honest contributions in the focus group discussions. Each focus group discussion included homogenous participants based on the specialty of healthcare sciences to ensure consistency of discussion. A trained moderator facilitated each group with two members of the research team acting as observers. Discussions were conducted in English but participants were allowed to speak in their native language if they desired. However, as the mode of teaching in KSAU-HS is in English, all the participants were fluently speaking English and were able to express themselves clearly. Focus groups were conducted until data saturation was reached and no new ideas were generated.

Focus groups were used to explore students' perceptions and attitudes of feedback received from faculty members. Each focus group enrolled students with the same designated major to ensure homogeneity in their experiences during the discussions. Students were assured that attendance is not mandatory and they received no incentives to participate. The sessions were recorded after receiving the students’ consent to audio record the discussions. To protect the anonymity of the students, no names were mentioned during the sessions and code numbers were used in the transcript. During each discussion, the moderator posed the open-ended questions listed in Appendix A. Probes were used in the discussion if required to stimulate the participants to elaborate extensively. The moderator and observers transcribed the audio recordings and independently read the transcript to confirm the validity and consistency of the transcripts.

Three investigators (AQ, LA, NA) who have previous experiences and undertook several training in conduction qualitative were involved in the qualitative analysis including the moderator and observers of the sessions. The data analysis was conducted using a thematic approach. Inductive analysis was conducted in which themes were generated from the data though open unlimited coding, followed by modification of themes. Inter-rater reliability/researcher triangulation was applied to ensure more complex and nuanced understanding of possible interpretation of the data were provided.11

Table 1
Participants characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Medicine</th>
<th>Pharmacy</th>
<th>Applied medical sciences</th>
<th>Dentistry</th>
<th>Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants (%)</td>
<td>32 (100%)</td>
<td>4(12.5%)</td>
<td>9(28%)</td>
<td>8(25%)</td>
<td>7(21.8%)</td>
<td>4(12.5)</td>
</tr>
<tr>
<td>Gender</td>
<td>15:17</td>
<td>1:3</td>
<td>6:3</td>
<td>4:4</td>
<td>4:3</td>
<td>0:4</td>
</tr>
<tr>
<td>Male: Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant codes</td>
<td>M1 to M4</td>
<td>P1 to P9</td>
<td>A1 to A8</td>
<td>D1 to D7</td>
<td>N1 to N4</td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–22</td>
<td>23</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>23–25</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Year of study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional year 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A: applied medical science students, D: doctor of dentistry students M: medical students; nursing students, P: pharmacy students.
As a first step, significant statements illustrating the perceptions and attitude of participants of feedback received from faculty members were highlighted. Each statement was grouped into larger units of information or categories. A consensus meeting was held to finalize the categories. Uncategorized important statements were identified and categorized. The analysis team independently developed and organized clusters of codes into themes that led to a composite description of the essence of the students’ perceptions and attitude.

Several meetings were held to refine the themes and revise the interpretations until consensus was reached. Randomly selected group of participants was asked to provide feedback on the themes and interpretations and to confirm that the results represented their perceptions and attitudes of feedback received from faculty members.

### 3. Results

#### 3.1. Demographic information

The sample size realized as 32 students of which 53.1% were female (Table 1). Seven focus groups discussions were conducted, each taking 50–90 min. The highest proportion of participants were pharmacy students 28.0% (n = 9) followed by applied medical sciences students (21.8%, n = 8). Most the participants (71.8%, n = 22) were between 20 to 22 years of age and almost half (46.8%, n = 15) was in the second professional year of study.

#### 3.2. Themes and subthemes

From issues raised in the discussions, five major themes emerged, some of which were divided in subthemes (Table 2). The major themes were the value of feedback, preferred feedback style, negative experiences and its factors, constructive feedback barriers, and mutual feedback. Distribution of participants’ contribution in study themes across disciplines of studies is illustrated in (Table 3).

##### 3.2.1. Theme 1: The value of feedback

Most students defined feedback as comments received by instructors, and agreed that the main objective of feedback in higher education is to improve students and correct misconceptions. Some of the participants mentioned that it is a student's absolute right to receive feedback during the educational process, as without receiving feedback students may not be able to recognize deficits, improve and achieve the learning outcomes.

"Vital importance, by feedback we know the gap and later make it better." (P1)

"Ethically, the student has the right to know why his grade has been subtracted." (AMS2)
Students frequently mentioned that the value of feedback depends on the behavior of the student and instructor. They stated that some students are more flexible to accept and consider any feedback than other students. However, perfectionists or irresponsible students may neglect all feedback they received. Faculty members’ behavior, as perceived by students, also affect the value of feedback; faculty demonstrating leadership and inspiring personalities are deemed more favorable.

“Feedback is very important to shape your personality especially if I have received it from very successful and kind of a role model to me. It would affect me more and help me to work hard to be as successful as him/her.” (P3)

Regarding the experience and level of faculty members, some participants stated that they would prefer feedback from an expert and a faculty member of a higher academic level. Medical and dentistry students appreciate feedback received from a clinical expert. However, other participants indicated that they do not care about the academic level of faculty members if the feedback they receive is beneficial.

"Sometime, the experience is more important than knowledge. When the instructor had more experience, he always provides me with a different solution as he might have had much similar cases. Knowledge can be obtained from books and it is always accessible to anyone.” (D1)

“…I don’t care about the rank of the instructor; it is about the amount of benefit that I got from them. Teaching assistants are very close to us and more understanding than the professors because of the difference in age.” (P1)

One factor that students believed to influence the value of feedback was a good relationship with the faculty member. There were disagreements regarding receiving feedback from a close faculty member or mentor. Some students believed that feedback from a close person would be of more value and honest, because the person would know the most about the student's performance, and thus, it would most likely be accepted. In contrast, others indicated that feedback from a close member would be inaccurate as it might be a kind of courtesy.

“…Sometime if I know the person and my relationship is strong, he may courtesy me” (AMS3)

“I prefer the stronger relationship, when she knows you she will thoroughly go through your work and she will give better feedback.” (AMS2)

When asked whether they value feedback linked with a grade, most students rejected feedback with an assigned grade explaining that it would not be taken seriously, even if they received a high grade. However, nursing students perceived that deducting a grade after previous feedback could be a motivation to work harder and avoid the repetition of the same mistakes.

“...If the instructors realized that I did a hard work whatever was my mark, then I should have a better feedback than my mark to feel that my hard work is appreciated.” (P4)

3.2.2. Theme 2: Preferred style

During the discussion, the students suggested several techniques they preferred on how to receive feedback. Most of the students agreed that feedback should start with a positive comment to gain the student's attention, followed by the most important negative comments and suggestions how students can improve their performance.

“It should be constructive, started with a positive thing and highlighting the areas that need to be improved and giving suggestions to improve, without leaving the student hang in there not knowing any option.” (AMS5). They also preferred specific feedback, delivered continuously at an appropriate time before the final assessment. Most of students agreed that they consider feedback before submitting the assignment more than after submission. Dentistry students expressed their need for more frequent and continuous feedback especially during skills based sessions. Medical and nursing students also appreciated continuous feedback during clinical
skills sessions. Furthermore, some of the students indicated that negative comments would be acceptable if it is delivered with a solution to encourage the student to work on the problem.

“During the practical session we receive continuous feedback that help us dramatically; when an instructor give me his comments after long observation and provide me a solution to improve step by step. It does not matter how the instructor deliver a feedback, is it friendly or more formal? It depends on the consistency of delivering the feedback as well as the constructivism of the feedback.” (D3)

“When an instructor gave me negative feedback followed by solution to overcome and fix it, not only give me his negative opinion and leave me without solution.” (AMS7)

Most of the students preferred the instructor to discuss the negative points or weaknesses before the final assessment privately, especially if it is a personal mistake or a comment on their behavior. However, some of students felt that if it is a common mistake of the class, it could be discussed in public anonymously. They declared the need for clear criteria or a rubric format provided to all students before starting to work on the assignment, which would prepare them for the type of feedback that they would receive. Feedback, as preferred by students, should be objective, following a rubric, with a balance between positive and negatives comments. One of methods suggested is providing feedback as a dialogue and using a more interactive approach with the instructor listening to the student’s justification; a method highly regarded and favored by all the students. When the feedback is open for discussion, students would be more responsive to the instructor’s comments.

3.2.3. Theme 3: Negative experiences and contributing factors

The students highlighted several contributing factors to negative experiences. First, students are discouraged if a comment is not related to the subject and irrelevant, especially if the topic is personal or cultural.

“One of the doctors commented on one of the student’s accent, and it was in public which embarrassed her and affected the other students’ level of self-esteem.” (P2)

Receiving a negative comment in public is perceived as embarrassment, particularly if it related to personal behavior. Students also stated that some of the feedback they received was not consistent with the assignments’ requirements. Negative comments should be limited to the most important negative points where improvement is required.

“The instructor requested us to prepare an overview/general topic without going further on the details. Although during the presentation, he surprised us with much specific questions on the details that we did not go through. He contrasted himself, although he had received the work before the presentation and he did not comment or ask to provide more details. I would prefer if he would provide us with his comment in private before the presentation.” (P6)

Furthermore, the students criticized certain criteria that some instructors used to evaluate a students’ performance. Dental and applied medicine sciences students complained about some instructors compare student's performance with another student during clinical skills based sessions. Students indicated that comparison with other students destroys their self-confidence and introduce unhealthy competition between students, which could affect the professional collaboration, and teamwork between them.

“I don’t like when the instructor started to compare my performance with others, or try to evaluate me based on his/her performance. Comparison destroys the students… Another point, when the student is asked to perform a new task, the instructors should not raise their exceptions, they should evaluate the students based on their performance as a beginner.” (D4)

3.2.4. Theme 4: Barriers that prevent constructive feedback

Limited time or the busy schedule of the instructor, as perceived by most of the students, was the main barrier preventing them from receiving feedback which makes communication between the two sides difficult, particularly when a student needs continuous feedback.

“The doctors give lectures per their specialty; you might see doctors once in the whole semester. So, they don’t stay with you for enough time to see improvements. It is difficult to approach them, in the hospital… specialists are too busy.” (M3)

Students stated that sometimes, due to a small number of instructors and many students, the instructors tend to limit feedback to one or two sentences. Sometimes, feedback is postponed to the end of the
session and delivered in general statements to all students in the class which make the students miss the chance to hear what part of his or her performance particularly required improvement. Some students mentioned that the instructor might be unaware of the importance of providing constructive feedback or unaware of the proper technique. They do not plan feedback proactively until the students ask for feedback or merely provide negative comments to students, which become a barrier for asking for feedback again.

“The teaching staff may wrongly have perceived that students need only the negative feedback as they may think that positive feedback may stop them from progress …. The positive practice needs to be recognized to keep it up by the students.” (P2)

Another point mentioned by students is that some instructors do not pay attention to the students’ performance as they are overwhelmed by the large number of assignments and examinations. Lack of experience or knowledge in certain areas may also be a barrier preventing the instructor to provide extensive feedback. Poor communication skills between the students and faculty member are also perceived as a barrier, as some instructors are well known for their poor communication skills and judgmental comments. On other hand, students believed that some instructors tend to be courteous to some of them and thus instructors would be hesitant to deliver honest feedback as they are concerned about hurting the students’ feelings. Students indicated that some students do not accept any kind of criticism, either due to perfectionism or due to sensitivity, creating a barrier to receive any kind of feedback especially if the instructor experienced the reaction of student before.

3.2.5. Theme 5: Mutual feedback

In the focus group discussions, students emphasized on the importance of mutual feedback between faculty members and students as well as between students themselves (peer feedback). The students indicated that if feedback provided to faculty members are taken into consideration, educational practices may improve. In addition, students could feel appreciated and encouraged to work harder. Students provided some examples of successful outcomes when they provided some faculty members with their feedback and how it influenced on the learning process positively. Students stressed on the significance of continuous feedback to faculty and not to be limited to the end of the semester, as any issues regarding the faculty member performance could be improved instantly. Students indicated that giving feedback to instructors should be anonymous and not on a personal level as some of the faculty may take it personally.

“It very important and we have noticed the effects and the improvement in teaching staff attitude. It should be continuous and not only at the end of the year. Also, to be anonymous, written to express and provide more data.” (D4)

When asked about whether students consider their colleagues’ feedback, most of the students perceived it to be substantial, and some indicated that they may consult their close colleagues before asking an instructor for feedback as their colleagues are more aware of their performance than the instructors. Some perceived peer feedback to be more acceptable because it would be more honest and straight forward.

“It is very important since we teach each other per our level in a simpler way, in contrast the instructor may teach us per standardized or optimal level, that makes it more difficult for us to approach.” (D1)

“My colleague knows me the most and knows the process that I have gone through. The mutual feedback would fix and improve both of us because we are in the same level and he understands me the most.” (N4)

However, some medical and pharmacy students were more conservative in receiving feedback from other students, as the educational environment makes the students more competitive.

“It is very important. However, we all know that the medical atmosphere is very competitive and we are not trained to give and receive feedback from each other.” (M3)

4. Discussion

This qualitative study was conducted to describe undergraduate healthcare sciences students’ perceptions and attitudes of feedback. As the findings demonstrated, students valued feedback from their faculty instructors that provide insight into their performance. Students...
considered feedback as part of the learning process to enhance their future practice in the medical field. Feedback is crucial to reduce gaps, optimize their paths and develop their personalities in the early stages of the years of study through constructive feedback. The findings are aligned with previous studies.\textsuperscript{6,9,10} Interestingly, some students considered constructive feedback as an ethical principle in education.

Several themes were generated from the collected data including the value of the feedback, the preferred style, negative experiences and contributing factors, barriers preventing delivery of constructive feedback and mutual feedback. Most of the students related the value of the feedback to the behavior of both sides of faculty members and students. Starting the feedback with a positive comment leads to more flexibility to accept the feedback and increases the value of the feedback. This finding supports the efficacy of the sandwich approach in giving feedback which suggests a negative criticism should be sandwiched between two positive comments to increase the acceptance of the criticism.\textsuperscript{12} However, most students agreed on the importance of continuous feedback especially in practical sessions and real-life scenarios with patients. These findings are supported in previous studies indicating that it is crucial to encourage positive attitudes and behavior towards constructive feedback.\textsuperscript{6,9,13}

Students reported positive experiences with constructive feedback, highlighting that constructive feedback could improve the practical and academic performance significantly. Especially when feedback focuses on strong points and that criticisms are accompanied with solutions to correct the deficit leading to the optimization of students’ performance. Some faculty members are aware of constructive feedback and students suggested training for faculty members to improve their ability to provide constructive feedback. Some students mentioned the sandwich technique of feedback, which indicates that some students are aware of processes related to constructive feedback. Both faculty and students require training related to constructive feedback. Evidence of this requirements is available in the literature.\textsuperscript{6,9,13–15}

Students also reported some negative experiences that pointed out some barriers to providing constructive feedback and turning it to destructive feedback. Giving negative comments about the performance or behavior of a student in front of the class causes embarrassment and lowers self-esteem. The most frequent obstacles described by the students were the lack of standardized feedback and focusing on irrelevant issues. Our findings are like Al-Haqwi and his colleagues in which around 85 students out of 186 indicated that barriers to effective feedback were unclear system of feedback, poor provision of feedback by instructors and fear of criticism.\textsuperscript{9} A major barrier mentioned by most of the students of all majors was the busy schedule of the faculty members and the increasing number of students per instructor causing either delay in providing feedback or not providing feedback at all. These findings are also reported in previous studies.\textsuperscript{9,14} Other barriers reported were the lack of awareness of faculty members regarding the importance of feedback, the lack of initiative to provide feedback, and a negative focus on faults and mistakes. Barriers not reported before in the literature are subjective feedback, adherence of instructors to false impressions of students as well as a tendency to compare the performance of students with other students or with faculty.

The influence of the academic rank of the instructor on the student acceptance of the feedback was controversial among the students and no study was found reporting that. Some dental and medical students preferred receiving feedback from higher levels of instructors, for example a professor, indicating that the higher level of experience of the educator was pivotal during practical sessions. Other students did not consider the academic rank of the instructor as an important factor. Nursing, as well as Applied Medical Sciences students preferred instructors with lower academic rank because the age gap is less, and increased availability of the instructor due to less busy schedule.

Some studies suggested that the relationship between the faculty member and the students is a strong predictor for learning.\textsuperscript{15–17} Higher levels of engagement and learning were reported when instructors employed collaborative teaching techniques. The current study explored this relationship and found a disagreement between students about this relationship in which some of them stated that the stronger the relationship, the more honest and valued the feedback they received, while other students were skeptical suggesting that a strong relationship might lead to a courteous feedback. Furthermore, feedback associated with grading were surprisingly controversial, some of dental students and applied health sciences students stated that they...
disregard feedback assigned by grades. However, nursing students as well as medical students stated that linking feedback with grades motivates them for better achievements and enhances improvements which align with a study found that while there was no significant improvement in the performance score for the students who were provided with compliments only. Surprisingly, attitude about feedback that is associated with grading was controversial among students. Some of the dental and applied medical sciences students stated that they disregard feedback assigned with a grade. However, nursing, as well as medical, students mentioned that linking feedback with a grade motivates them to higher achievements and improvements.

Henderson, P. et al., 2005 concluded that the concept of working in a mutual and respectful partnership is the key that enhances the beneficial outcomes of the constructive feedback. This conclusion is aligned with this study where mutual feedback or peer feedback was emphasized by students. The participants suggested the dialogue feedback method between the faculty members and students to optimize feedback benefits, and elaborated that dialogue clears any misunderstanding, clarifies hidden issues, and minimizes the effect of a first impression between the two parties.

Generally, providing constructive feedback is encouraged by academic educators to adding necessary input that ultimately enhance learning and developmental needs. Moreover, it fortifies the cooperative behavior imperative for the peer feedback. Students need opportunities in each curriculum to provide feedback based on mutual understanding to its academic relevance. While the institution should provide feedback in a safe and friendly environment, training for participants is warranted for providing constructive and specific feedback that raise excellent behaviors and address concerning ones. The benefit of dialogue feedback was highlighted by Blair et al. (2014), who investigated dialogue feedback and methods to implement practical strategies for enhancing the dialogue between instructors and students. In addition, mutual feedback will eliminate the students’ dependence misconception about feedback that is merely the responsibility of tutors and help them to enhance their reflection and critical thinking. Moreover, peer feedback is highly acceptable between medical students and allow the students to receive feedback from a different perceptive but in the same lived environment which can help to build trust and develop the students’ ability to construct feedback.

Our study highlights many ideas and perspectives regarding academic feedback from faculty members towards students, we are aware of limitations that had been met with many attempts to be minimized as possible. The dynamics of the discussion among groups might be biased to some extent, for example, the difference in personalities of students leads to dominance of majority of opinions in favor of dominant students and due to reluctance of students with opposing point of views to contribute, this was minimized by trained monitors who stressed on the confidentiality of the study and encouraged students to talk freely about their point of views. Some students focused more on their negative experiences at the expense of the positive which might exaggerate the negativity expressed. Despite that this study provides helpful information about the perception and attitudes of undergraduate healthcare sciences students which was conducted in one institution of healthcare sciences students with different disciplines. The results might be not generalizable to other institutions or academic specialties where there might be variation in the institutional culture as well as application of the concept of feedback, and this opens the door for future confirmatory qualitative or quantitative studies.

5. Conclusions

Healthcare sciences students are aware of the significance and purpose of feedback; however, some feedback acceptance differ between students. Most students indicated that feedback should be a continuous process and not ultimately provided at the end of the academic term. However, the influence of the academic rank of the instructor on the student acceptance of feedback had controversial point of views, which need to be addressed more in further research. Creating opportunities for dialogue with peers and faculty members should be considered as an integral item to the feedback process to help improving students’ self-reflective abilities. Future studies could assess these perceptions by a quantitative method that is applied to large numbers of participants in different locations, to enable generalization. Furthermore, studies of the perceptions of faculty members toward feedback are needed.
Acknowledgements

We would like to show our appreciation to college of Medicine, Pharmacy, Dentistry, Applied Medical sciences and Nursing Students Affairs for their valuable help with recruiting the participants.

Declarations

Ethics Approval and Consent to Participate: Ethics approval was received from the King Abdullah International Medical Research Center (KAIMRC) in October 2016. The study was conducted between October 2016 and April 2017. All participants signed a consent form, and confidentiality was assured by securely storing the data.

Competing interests

The authors declare that they have no competing interests.

Appendix A. Open-Ended Questions for the Interview

Questions:

1. In your opinion what is a feedback?
   Probes:
   - Could you explain more?

2. What is the importance of feedback?
   Probes:
   - How does it affect your educational and personal development? In which degree?

3. Think back over all years and tell me about a feedback you appreciated or benefit from?
   Probes:
   - What was the outcome of that feedback?

4. Tell me about a feedback you did not like or had a negative impact on you?
   Probes:
   - Give me more detail about what happened.
   - What do you suggest to avoid this kind of situation?

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors’ contributions

H.M. made substantial contributions to conception and design, and has been involved in drafting the manuscript and revising it critically for important intellectual content. L.F contributed in methods of the study design, acquisition of data, analysis and interpretation of data; and been involved in drafting the manuscript or revising it critically for important intellectual content. A.Q. contributed collecting data, analysis and interpretation of data and been involved in drafting the manuscript or revising it critically for important intellectual content. N.S. contributed in methods of the study design and has been involved in drafting the manuscript or revising it critically for important intellectual content. All authors agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
5. What are factors or barrier that influence giving an honest and constructive feedback?
   **Probes:**
   - How to overcome these factors?

6. What improvement you think can be made to provide proper feedback?
   **Probes:**
   - How can it be implemented?
   - How necessary is it?

7. What is the characteristics of effective feedback?
   **Probes:**
   - What is the best time to receive feedback?
   - What is the best location to receive feedback?

8. Why do you think the faculty members give feedback?
   **Probes:**
   - Would you care about the level of faculty members whether they are teaching assistants, lecturers or assistant professor? Which one you prefer?

9. When do you seek feedback?
   **Probes:**
   - When do you need it the most?

10. What kind of person you prefer to receive a feedback from?
    **Probes:**
    - Does the strength of relationship affect your reaction to the feedback?

11. What is the importance of your colleague to give you a feedback?
    **Probes:**
    - Can you give us an example?

12. What is an ideal feedback system you prefer the teaching staff to follow?
    **Probes:**
    - Can you explain more?
    - Give me an example of a feedback you like?

13. How your perception about the feedback has changed over the years?
    **Probes:**
    - What was your opinion about feedback 3 years ago?
    - What is your opinion now?

14. How essential is the role of student to provide a feedback to a teaching staff?
    **Probes:**
    - Under what conditions?

15. What do you think about feedback that is reflected by grades?
    **Probes:**
    - Can you explain more?
References


Lama Alfehaid is teaching assistant at College of Pharmacy; King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

Amenah Qotineh is lecturer at College of Pharmacy; King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

Nada Alsuhebany is teaching assistant at College of Pharmacy; King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

Shmylan Alharbi is associate dean, and associate professor at College of Pharmacy; King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia. He is also clinical pharmacy specialist, at Medical, Surgical Critical Care; King Abdulaziz Medical City, Riyadh, Saudi Arabia.

Hind Almodaimegh is associate dean, and assistant professor at College of Pharmacy; King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia. She is cardiology specialized residency program director and cardiology clinical pharmacy specialist at King Abdulaziz Medical City, Riyadh, Saudi Arabia.